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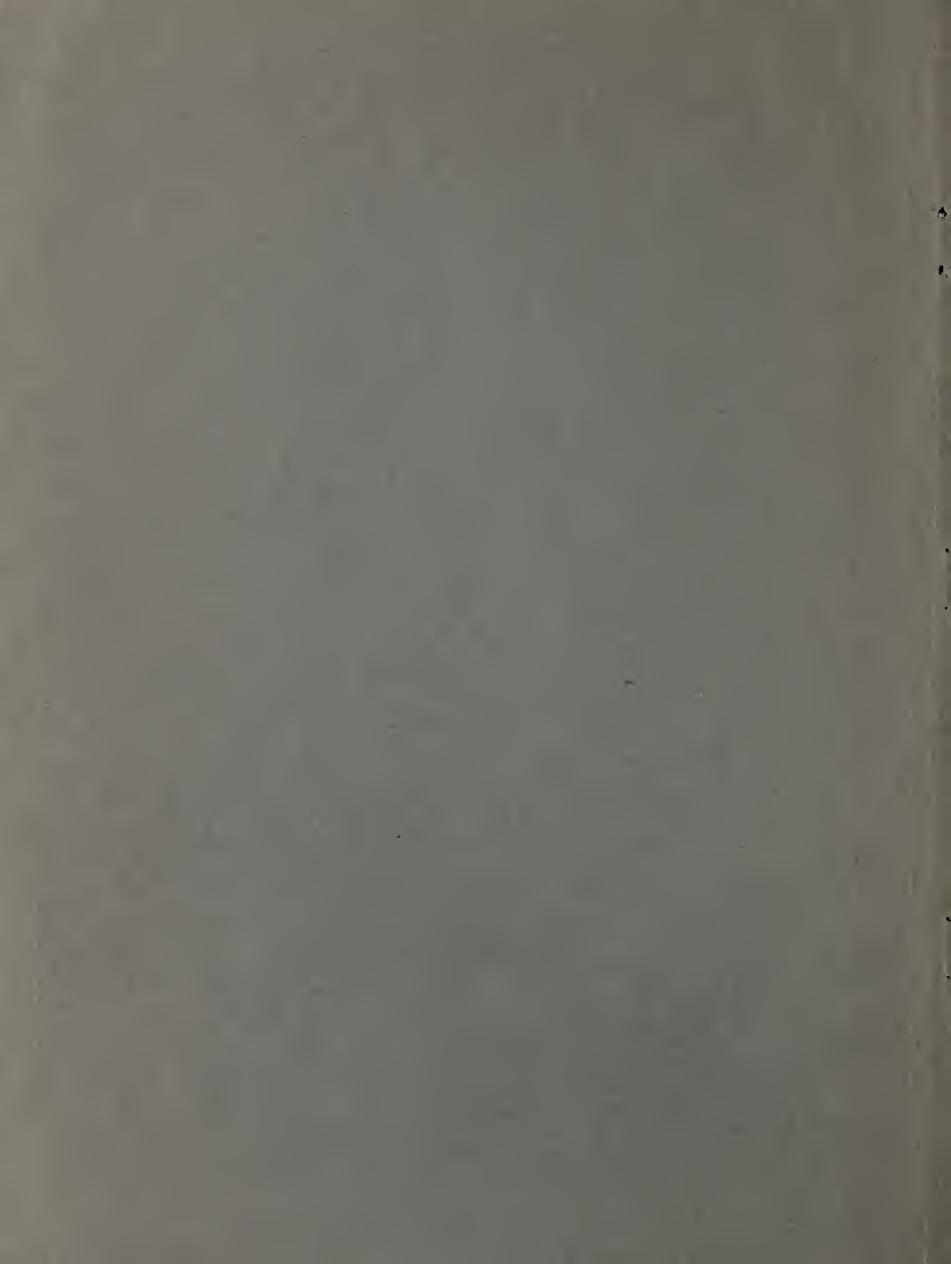


# U. S. Department of Agriculture, Forest Service FOREST PRODUCTS LABORATORY

In cooperation with the University of Wisconsin MADISON, WISCONSIN

## LUMBER AND LOG GRADES FOR SOUTHERN HARDWOODS

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Forest Products Laboratory, Branch of Research, Forest Service,
United States Department of Agriculture

#### INTRODUCTION

This report gives information obtained from mill studies on lumber grades, percent defect, overrun for southern hardwood logs of different sizes, qualities, and species for use in evaluating stands of timber in connection with the Forest Survey. It should prove useful as a basis for developing better quality and use grades for hardwood logs.

#### METHOD OF STUDY

The study was made at eight large sawmills and consisted in scaling and grading logs on the mill deck, then tallying the lumber separately on the green chain for each log. The lumber was identified by numbering each board as it was cut. The Scribner Decimal C log rule was used and

The field work in connection with the study was done cooperatively with the Southern Forest Experiment Station, E. L. Demmon, Director, and the Forest Survey, I. F. Eldredge, Director, G. H. Lentz, Assistant Director, and eight lumber companies. The analysis of the results and the preparation of this report were done by the Forest Products Laboratory.

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the average diameter to the nearest inch was used instead of measuring them the smallest way and reducing the result where the measurement was fractionally over an inch as is done in commercial practice. This latter method gives results about 8 percent below those obtained by standard Forest Service scaling methods. To make the results more useful, however, overrun is shown based on both the Scribner and Doyle log rules. The lumber was graded and tallied in the green condition in accordance with the rules of the National Hardwood Lumber Association, but the footages upon which overrun is based were adjusted to a dry lumber base by deducting 7 percent for oak, 6 percent for ash and cottonwood, 7 percent for red gum and elm, 5 percent for black gum and cypress.

The species have been grouped in certain cases and under "white oak" there are included post oak, forked-leaf oak, and cow oak; under "red oak," cherrybark and black oak; under "water oaks," willow oak, Nuttall oak, lowland black oak, and pin oak; under "ash" are both green and white ash, but mostly it is white ash; and under "elm" are both soft elm and cedar elm, however, only about a half dozen cedar elm are included.

The general location of the different mills follows:

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- Mill No. 1. -- Located in northern Louisiana. Equipped with a single band and resaw.
- Mill No. 2. -- Located in east central Louisiana. Equipped with a single band saw.
- Mill No. 3. -- Located in east central Louisiana. Equipped with a single band and resaw.
- Mill No. 4. -- Located in western Tennessee. Equipped with single band only.
- Mill No. 5. -- Located in east central Arkansas. Equipped with single band saw only.
- Mill No. 6. -- Located in northeastern Arkansas. Equipped with single band saw only.
- Mill No. 7. -- Located in northeastern Arkansas. Equipped with single band and resaw.
- Mill No. 8. -- Located in northeastern Arkansas. Equipped with single band and resaw.

#### LOG GRADES

The information on log grades which follows must be considered as tentative since it is most probable that as the study progresses changes will be made in the proposed grades.

The tables show the different species by diameter classes separated into four groups, except cypress, for which no attempt was made to grade the logs. The groups

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are based specifically on the grade yields and the separation is exact. In the field, in applying log grades based on external appearances as well as grade yield stipulations, some of the logs were misgraded. In this report these logs have been put in their proper grades, and the averages show results when all logs are accurately classified according to grade yield.

The species have been divided tentatively into two groups based on the minimum sized log that can be admitted:

Group 1 includes the oaks, elm, cottonwood, and black gum;

Group 2, ash. In addition the following grade yield requirements have been used: For oak and elm, No. 1 logs must cut out at least 70 percent No. 1 C and Better and 20 percent

Firsts and Seconds, No. 2 logs 50 percent No. 1 C and Better,

No. 3 logs 25 percent No. 1 C and Better, and No. 4 logs all those cutting less than 25 percent No. 1 C and Better. For black gum, cottonwood, ash, and red gum, No. 1 logs must cut out at least 70 percent No. 1 C and Better and 30 percent

Firsts and Seconds, No. 2 logs 50 percent No. 1 C and Better and 10 percent Firsts and Seconds, and No. 3 and No. 4 logs the same as previously shown.

In addition to the general appearance of the logs as related to grade yields the following tabulation of defects and sizes has been set up as a guide. As a further guide there should be some stipulation as to proportion of

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the log that must be surface clear to make the grade. No data are available on this phase at present. In grading red gum some stipulation in regard to the proportion of red that logs of a given grade should cut out is also desirable. In this report the sap and heart have been considered together.

#### HARDWOOD LOG GRADES

#### No. 1 Logs

```
Group 1
                                          Group 2
                                  Trees 16" D.B.H. or more
   Trees 20" D.B.H. or more:
Butt logs:
                             :Butt logs:
 16"-18"-- clear
                             : 12"-15"--clear
 19"-22" D.I.B.--1 standard : 16"-18" D.I.B.--1 standard
                                                       defect
                        defect:
 23"and up-- 3 do
                        do: 19"and up-- 3
                                                   do
                                                          do
Other logs:
                              :Other logs:
 19"-24" -- 1 standard defect: 15"-20" -- 1 standard defect
 25"and up -- 3 do do : 21"and up -- 3 do
                         No. 2 Logs
Butt logs:
                              :Butt logs:
12"-13"-- clear : 10"-11"-- clear 12"-18"-- 2 standard defects : 10"-14"-- 2 standard defects
19"and up-- 4 do
                              : 15"and up-- 4 " "
                         do
Other logs:
                              :Other logs:
 14"-18"-- 1 standard defect 19"-24"-- 3 do do
                              : 10"-14"-- 1 standard defect
                              : 15"-20"-- 3
                                               do
                                                       do
All logs:
                              :All logs:
 25"and up -- 5 do
                              : 21"and up-- 5 do
                        do
                                                       do
```

#### No. 3 Logs

Shall include all other logs 12 inches and up D.I.B. which because of defects do not fall in grades 1 and 2 but do

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contain 25 percent No. 1 Common and Better lumber and can be utilized for either lumber, ties, timbers, bridge planking, etc. (two faces that will cut No. 1 Common).

#### No. 4 Logs

Shall include all logs not included in foregoing grades.

#### Standard Defect

A standard defect shall be measured by the damage resulting from:

A 4" sound knot or its equivalent in smaller knots or other defects, such as grubs, worm holes, bird pecks, bark pockets, etc.

A 4" sweep in logs under 18" in diameter equals 1 defect.

A 6" sweep in logs 19"-24" in diameter equals 1 defect.

Sweep in logs larger than 25" in diameter is no defect.

#### PRESENTATION OF DATA

Insofar as was practicable results have been separated by mills. A comparison has been provided that takes into account the comparable data from all mills studied.

Table A gives the time required by the single band mills to saw a thousand feet of lumber from logs of different sizes and species. No delay time is included in these figures.

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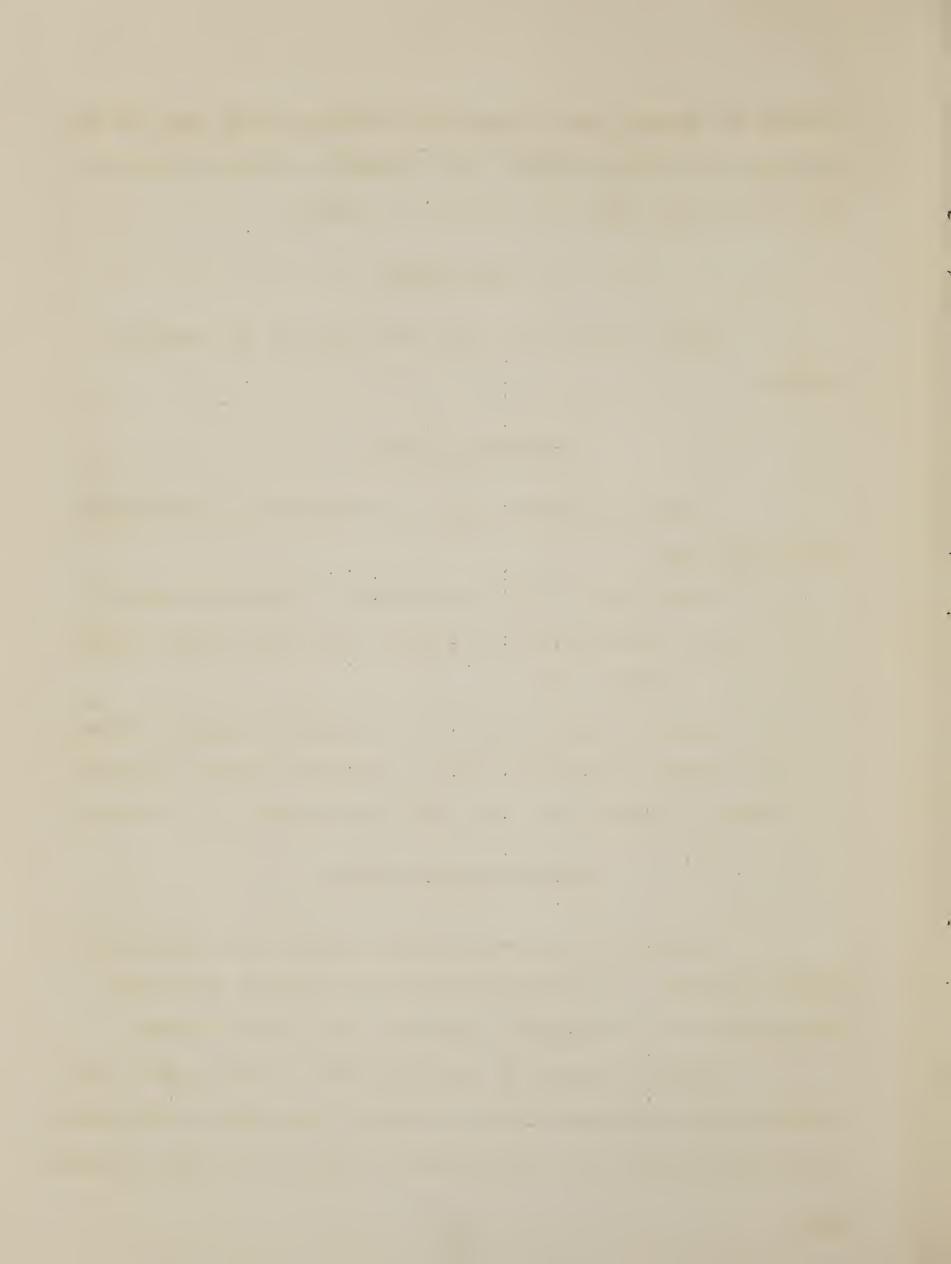


Table A. -- Actual sawing time per thousand board feet of lumber for different species and log sizes at single band mills (without resaws)

	:White	overcup, red, and water oaks:	Red:		Cotton-		Cypress
Inches	<u>M</u>	inutes per	thousar	nd boat	rd feet ]	Lumber	tally
11 12 13	25.9 25.1 24.0 22.8 21.3	27.6 23.3 20.8	15.6 15.2 14.8 14.4 14.2	28.6 25.8 23.6	12.9	19.1 18.3	
16 17 18	19.9 18.8 18.5 18.7 19.8	17.3 16.9 16.5	13.9 13.7 13.5 13.3	19.6	12.3 : 12.2 : 12.0 :	15.7:	11.2 10.7 10.4
21 22 23	20.9 21.9 22.8 23.6 24.3	15.6 15.4 15.2	13.1 13.0 12.9 12.8 12.8		11.7	14.0: 13.7:	9.5 9.3 9.0
	24.9 25.5 26.0 26.4 26.8	14.5 14.5	12.7 12.7 12.6 12.6 12.5		11.0	12.8: 12.7:	8.5 8.4 8.4
30 31 32 33 34	27.2 27.5 27.8	14.5 14.6 14.8 15.2 15.6	12.4 12.4 12.3 12.2 12.2		10.3 10.2 10.1 10.0 9.8	12.5	8.4 8.5 8.5 8.6 8.7
35 36 37 38 39 40		16.0 16.5 16.9 17.4 18.0 18.5	12.1 12.0		9.7		9.1
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In general the sawing time is greater for small logs than for medium large logs, but for the largest logs the time is somewhat greater for the medium-sized logs.

Table B gives the sawing time for the mills equipped with a single band head saw, supplemented by a resaw. Where sawing practices are comparable a resaw supplementing a head saw appears to increase output about 70 percent as compared with a single band mill. With cypress, however, the single band mills sawed faster in some sizes but this is due to the high proportion of thick stock that was cut. The amount of quarter sawing accounts for the sawing relationship between the two classes of mills being somewhat out of line for white oak.

The time required to saw a thousand board feet of lumber is influenced by thicknesses of lumber sawed and the proportion of timbers. Table C presents figures showing by mills and species the proportion of the cut that was sawed into the different thicknesses, also the average for all mills. This information is necessary in order to understand fully the comparison of sawing time, overrun, and grade yields shown in the various tables in the report. Thicknesses of lumber varied from 1/2 inch to 12/4 inches. No. 3 and No. 5 ties were cut and a few timbers no larger in cross-section than the ties.

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Table B.--Actual sawing time per thousand board feet of lumber for different species and log sizes at single band mills with resaw

	:White	Overcup, red, and water oaks	Red:	Ash		Black gum	Cypress
Inches	Mi	nutes per th	nousand	board	feet	lumber	tally
10 11 12 13 14	11.8 10.7 9.8	15.3	12.3: 11.4:	13.0:	18.0 15.7 13.7		20.0 18.2 16.4 14.6 13.0
15 16 17 18 19		9.9	9.4: 8.8: 8.4:	11.1: 10.8: 10.6:	9,7 8,8 8,3	14.3 14.4 14.6 15.1 15.7	: 10,4
20 21 22 23 24	7.6 8.2 9.4 11.2 12.6	9.0 9.0 9.0	7.4: 7.1:	10.3: 10.3: 10.3:	7.2 7.0 6.9	16.6 17.7 18.6 19.4 20.1	9,9 9,9 9,8
25 26 27 28 29	13.6 14.4 15.2 15.9 16.5	8.8 8.8 8.7	6.5.6.4.6.4.6.4		6.7	20.7 21.2 21.6 22.0 22.3	
30 31 32 33 34	17.0 17.5 17.9 18.2 18.6	8.6 8.5 8.5	6.4 6.4 6.4 6.5			22.6 22.8 23.0 23.2	
35 36 37 38 39 40	18.8 19.0 19.2 19.4 19.6 19.8	9.0 9.4 9.9 10.4	6.5: 6.6: 6.6: 6.7: 6.7:			23.4	

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Table C. -- The proportion of the cut that was sawed into the different thicknesses by mills and species

Thickness	•		1	Mill n	imbers		rieg	s र प्र	
of material	1	: 2	3	: 4	5	6	7	8	All
Inches	The Part of the Pa		Per-	ACCUPATION OF STREET	Per- cent			-	Per-
3/4 4/4 5/4 6/4 8/4 10/4 12/4 Timbers	0.8 96.4 1 1.6	47,0 43.7	10.0 5.6		44.8 4 51.8	74.6		48.6 16.0 3.7 9.3	4.4 12.5 4.0 .2 5,5
4/4 5/4 6/4 8/4 10/4 12/4	1.9 8.7 67.6 .9 10.0			64.3 .1 31.7 3.9	47.2	69,9 .1: 2:4	98.3 .1	.7 39.9 19.9 7.5 16.8	75.0 .7 12:8 5:4
	27.0 73.0	36.0 18.6 41.5	53.8 46.2	3.3 47.1 2 49.2	55.4 .3 39.6	21.9	:		1.0 3.3 12.2 56.3 1.3 25.3

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Table C (continued)

Thickness;			<u> </u>	Aill nu	umbers	-			All
material	1	2	3	4	5	6	7	8	mills
				Married Spring Spring Spring	Per-	The state of the s	Per-	Per- cent	
Water Oaks	<u> </u>								
1/2 5/8 3/4 4/4 5/4 6/4 8/4 10/4 12/4 Timbers	0.1 .6 18.5 80.6	19.7 40.6	47.1 52.6	.3:	58.8 .2 .35.4 .6 .3		56.5 42.8	95.8 1.3	4.8 30.3 .3
Red Gum						- <b></b>	:		:
1/2 3/4 4/4 5/4 6/4 8/4 10/4 12/4		2.5 57.3 23.6 16.6	11.9	7.7 29.8			81.4 18.5 .1	8.4	
Green and	White	Ash :	- <del></del>		:				
4/4 5/4 6/4	46.9 32.7 2 9.9 8.3 1.4	-	1.5	66.1 33.5 .4		,		1.0	24.9 46.2 3.5 19.5 4.6 8
White Elm									
4/4 5/4 6/4 8/4 10/4 12/4		67.7 32.3	99.4				37.5	84.6 6.0 2.4 2.7 3.7	29.5 20.8

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Table C (continued)

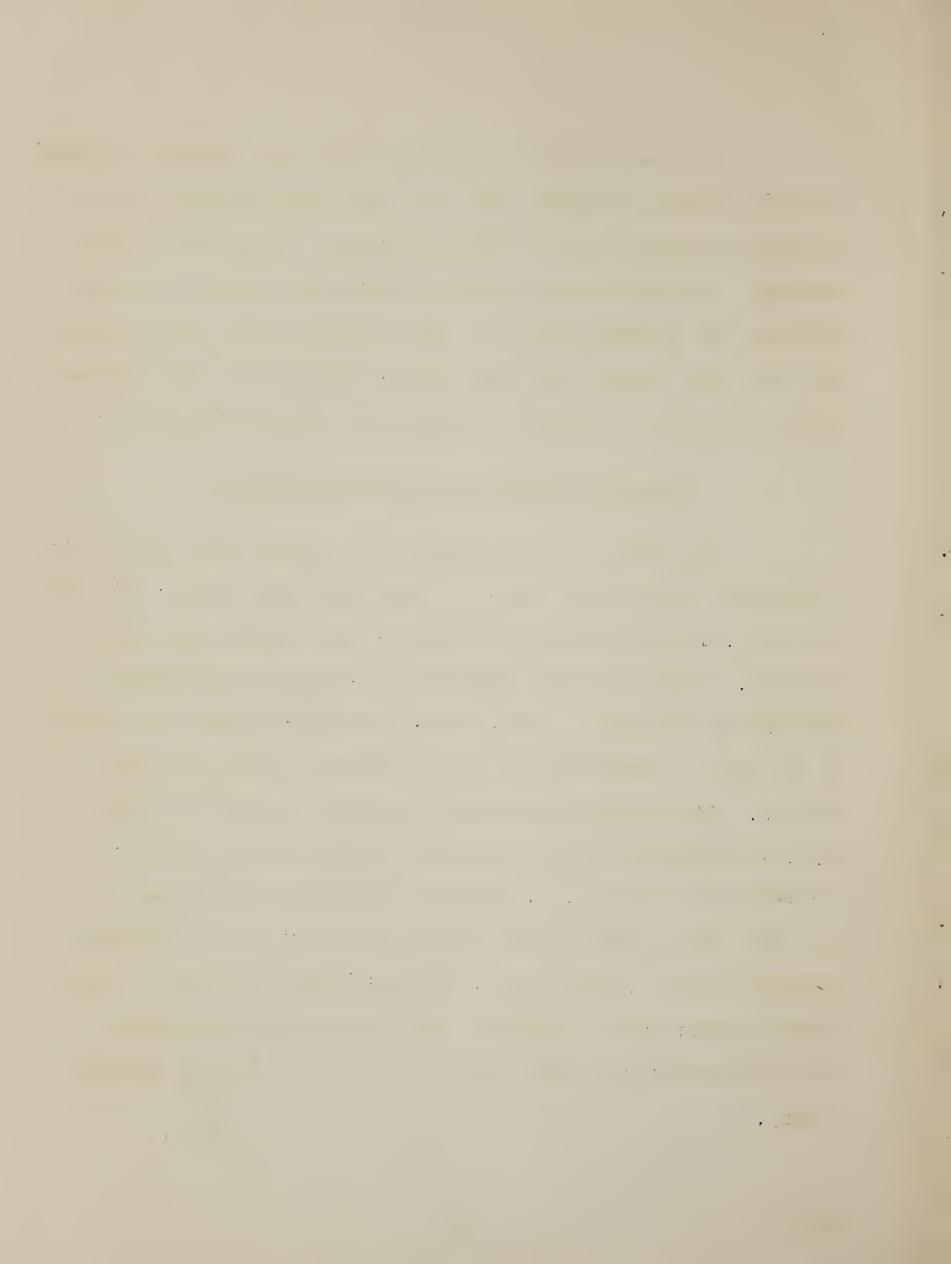
Thickness of	Mi	ll numbe	ers	All
material	2	7	8	mills
Inches	Per- cent	Per-	Per- cent	Per- cent
Cottonwood	<u>i</u>	•		
4/4 5/4 6/4	45.3 .4 54.3	99.6		49.7 .4 49.9
Black Gum				
4/4 5/4	99.5	100.0		99.5 .5
Cypress				1
4/4 5/4 6/4 8/4 Timbers	7.8 86.8 5.4	82.0 .6 13.8 3.1 .5	71.3 .3 4.8 23.6	24.8 66.5 2.6 .8 5.3

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Tables 1 to 10, inclusive, give the results on grade yields, overrun, and the like, by log grades, species, and diameter classes for all mills together. In addition, the average for each mill is shown so that the cooperators can compare the figures for their own operation with other mills and with the average for all mills. Table 11 is for cypress and no attempt was made to separate the logs into grades.

#### Example of the Use of Tables 1 to 10

In Table 1, for example, the figures for white oak (includes forked-leaf, post, and cow oak) are given. Suppose Mill No. 1 is reviewing the report. The figures show that for No. 1 logs this mill obtained 52.0 percent Firsts and Seconds as compared to 48.2, 47.8, and 38.9 percent for mills 4, 6, and 8, respectively, and an average of 47.3 for all mills. The underrun was found to be 21.3 percent at mill No. 1 as compared to 15.0 percent for all mills, or 19.0 percent for mill No. 7. Similar comparisons can be made for all the other items in the tables, such as quality, overrun, percent defect, percent No. 1 C and Better, for logs of different sizes and log grades. The tables are sufficiently self-explanatory so that introductory discussion is unnecessary.

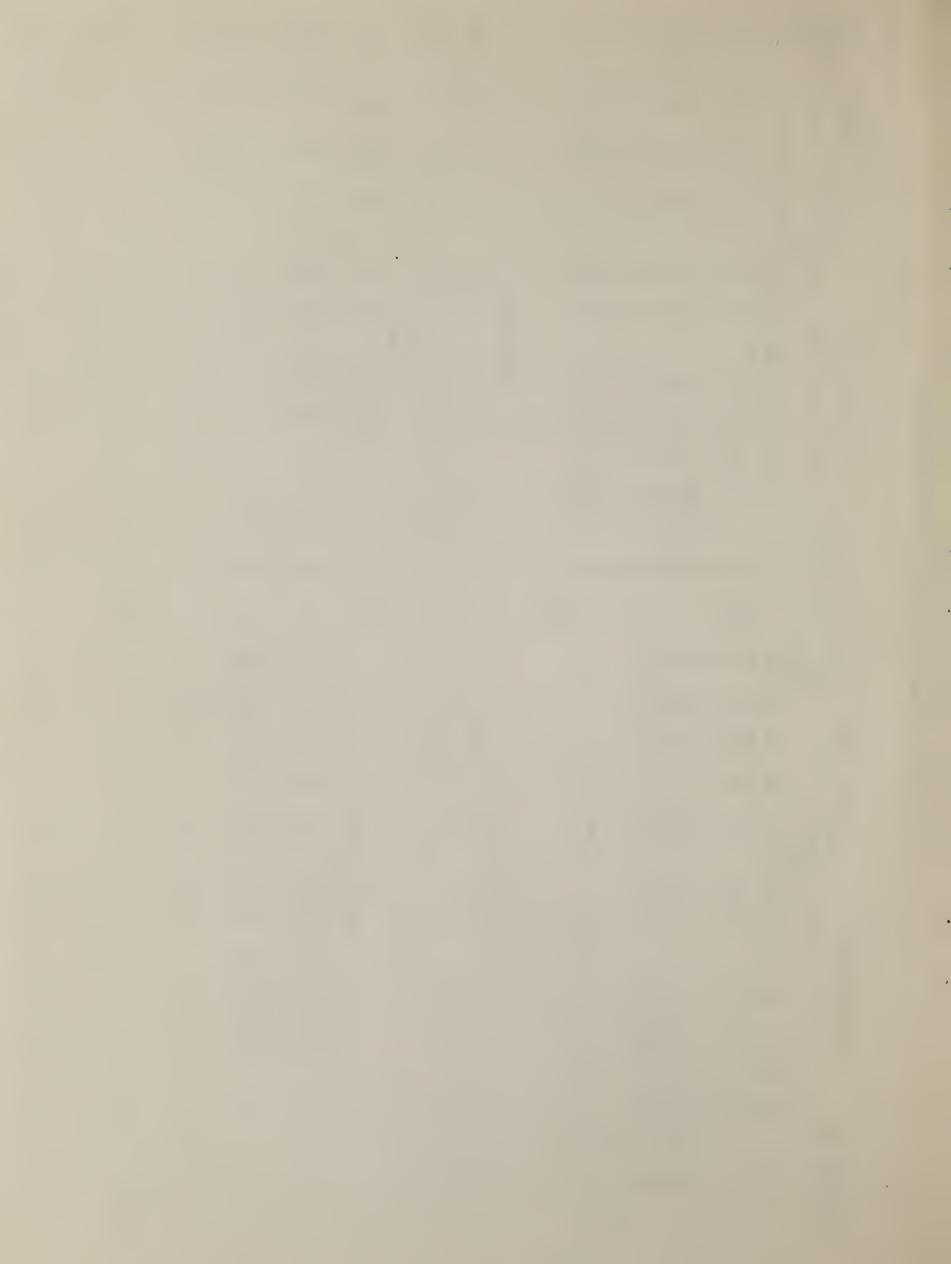


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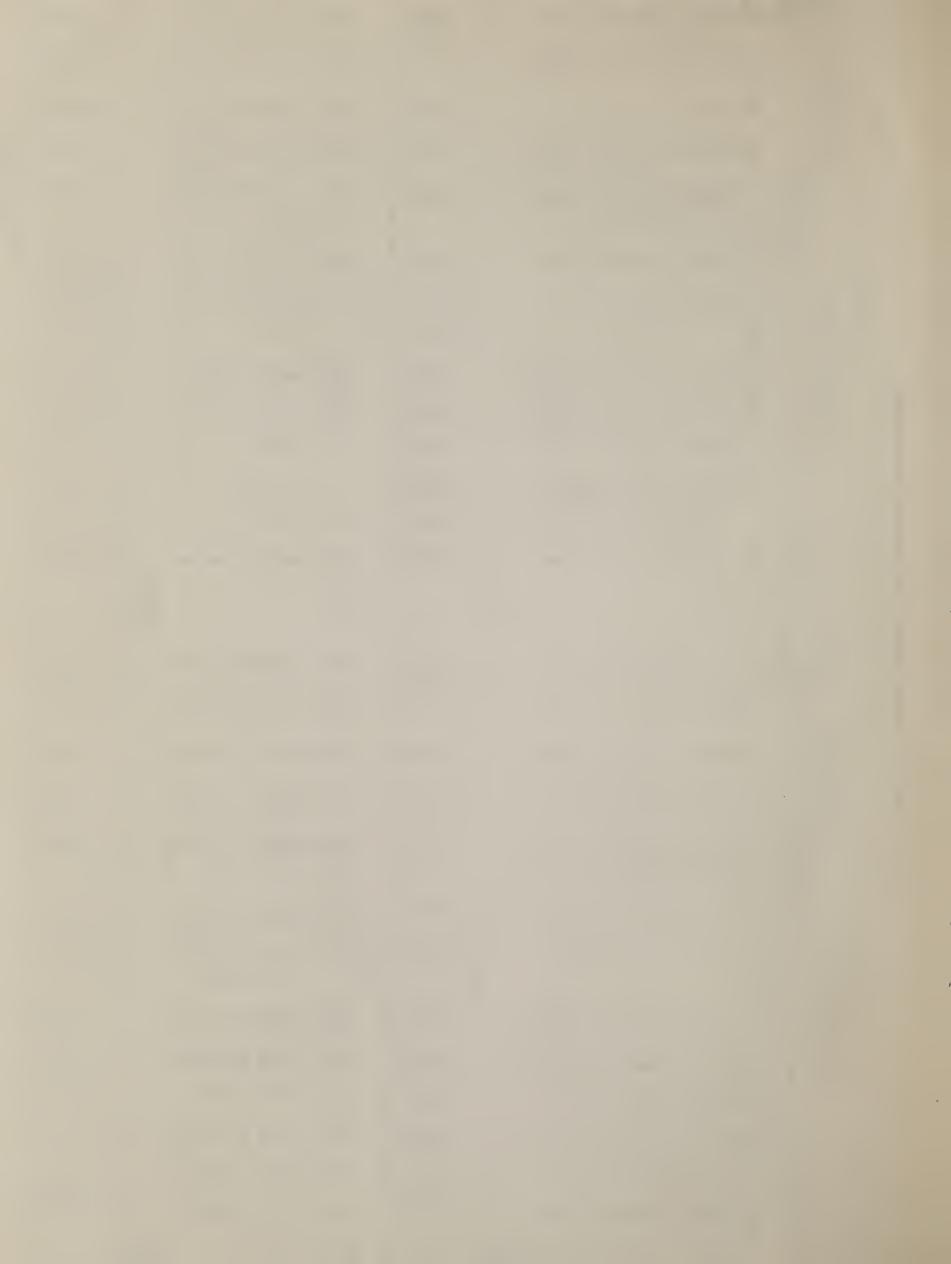
Table 2 .-- Overoup oak -- Percentage of lumber by grades, overrun, and defect by log gradee

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MO. 2		No. 3B	Per	#11171 967476	4.6.1.0.2.1.2 1.5.5.0.0.1.2	11.11.11.11.11.11.11.11.11.11.11.11.11.	11.3		2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2		62.8 31.12.4 39.9	2222.2 2422.5 245.5 245.5	23.3	42 84 85 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	12.9	29.8	25.2 46.0 11.7	30.9	LABORU SCONSIN
GRADE	dee	.Ko.3 A	Per	6.11 6.7.7.6 6.7.7.6	44 rvi 0   0.0 0 rvo40 8 r	440114 804000	5.3	by m11	7.0.0	DE NO.	1 2 2 4 4 1 2 2 2 4 1 2 2 2 2 4	12.4 16.5 17.0 17.0	21.6 4.2 26.2	7.5	5.2	15.8	18.9 7.0 19.8	12.4	RODUCTS SON, WI MAY 19
100	nt gra	Sound	Per		0     00		0.3	1 (12)	90   110 110	OO GRA	11111	17.1 9.3 4.0	6.0		46.4	#O #O	9.9 7.2 23.6	1.3	OREST P
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	ber in	No.1 0	Per	225 232 256 256 256 256 256 256 256 256 256 25	#444444 196069761	2003 2003 2003 2003 2003 2003 2003 2003	43.0	14:	33.55		101011	9.5.01	16.2	135.0	11.6	10.2	11.3	13.9	
	Lum	eleote	Per	22.22 21.5.3 20.3 20.3 20.3	47.600.00.00.00.00.00.00.00.00.00.00.00.00	2011 2011 2011 2011 2011 2011 2011 2011	6.6	-t-	21.6 10.1 5.5.7 5.5		11111	6.00		2.2		0.5	0.5	1:0	
			Per :	25.55.2 2.55.75.2	1100 1100 1100 1100 1100 1100 1100 110	20.52 20.53 20.53 20.53	11.9:	14.2:	13.5		11111	11001	2.9	1:5	::. : ::	0.5	4.00 4.00	1:7	
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	lume	r lo ade umbe	Per	6.6.0 6.9.9 6.9.5 6.5	24.84.000 24.84.000 24.84.000	ħ.μ2		4.7.	51.4 36. 50. 2.5 50. 2.5		2.9	25.05.75 2.0.04.80	1.01.7.7.7.	2.1	1.9	23.8	28.9	34.8	
	Volume in each	fect; or log: grade : grade : lumber	ادد	·· ·· ·· ·· ·· ··	000000 000000		······································		11.8 8.5 8.3 11.1 10.8 10.8 10.8	• • • • • • • • • • • • • • • • • • • •		22.0 17.1 10.3 17.5 17.5 17.5 17.5 17.5 17.5 17.5 17.5	000000			4.3 23.8	5.1 3.3 3.3 4.3 11.1	oini	
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	n and under Volume		Per Per cent:	2000 2000 2000 2000 2000 2000 2000 200		2.1 2.0		- 5.6	12.55		58.0 54.4 54.4 50.0 74.4 74.6 74.6 74.6 74.6 74.6 74.6 74.6	35.4 1856 1775 1955 103 103	1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	13.9	- 2.9 13.2 -27.7 13.2	•••••	42 24.2 2.4.2 2.4.3 2.4.3	3.97	
	Overrun and under Yolume : Tun on net scale:	Defect: 0	Per Per cent:	119.1 110.1 22.32.4 110.0 22.33.4 4.7 5.65.3 4.7	100001 0000-4090	2.1 2.0			7.6 12.5 1.8		58.0 54.4 54.4 50.0 74.4 74.6 74.6 74.6 74.6 74.6 74.6 74.6	15.1 35.4 1.1 8.5 18.6 2.0 17.5 7.1 9.2 19.5 1.3	1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9.7 13.9 14.6	- 2.9 13.2 -27.7 13.2		11.7 2.2 2.4.3	3.97	
	Overrun and under,	Defect: 0	Per : Per : Per : Per : cent :	78.7 81.4 18.1 28.8 6.4 85.4 11.0 22.3 4.7 85.0 - 0.1 5.6 2.9	81.5 82.5 - 8.4 - 5.8 86.6 - 12.1 - 1.2 87.4 - 8.7 - 4.9 87.6 - 13.5 - 4.9 87.6 - 13.5 - 4.9 80.7 - 6.8 - 13.7	82.8 - 1.8 2.1 2.0		78.0 - 7.3 - 5.6 0.0	83.9 7.2 11.4 2.5 83.5 80.2 - 4.0 1.1		33.7 26.4 58.0 0.0 31.6 35.3 54.4 0.0	35.7 15.1 35.4 1.1 34.5 2.0 37.4 3.0 17.5 7.1 37.4 3.0 17.5 7.1 37.0 37.0 17.5 7.1 36.0 1.2.2 1.5.3 1.0 3.0 1.	33.6 - 7.6 0.3 2.0 3.2 40.3 - 14.4 - 12.8 0.0 41.7 - 8.3 - 3.6 8.2 8.2 8.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1	49.4 9.7 13.9 14.6	0.7 - 2.9 13.2 - 25.0 -27.7 13.2		37.0 4.4 11.7 5.1 34.1 - 4.3 2.2 3.3 40.7 3.4 24.3 4.3	2.54	
	Overrun and under,	mmon:	Per: Per : Per : Per : Per : Dent : Oent : O	78.7 19.1 22.4 0.0 81.4 18.1 28.8 6.4 85.0 85.0 65.4 0.0 64.4 2.8 5.8 2.9	1.7 83.5 0.5 5.8 1.6 85.0 0.0 86.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.3 82.8 - 1.8 2.1 2.0		0.0: 78.0: - 7.3: - 5.6: 0.0	63.9 7.6 12.5 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8		33.7 26.4 58.0 0.0 31.6 35.3 54.4 0.0	13.8; 35.7; 15.1; 35.4; 1.1; 37.3; 35.7; 36.5; 18.6; 2.0; 17.5; 7.1; 14.3; 37.4; 9.2; 19.5; 1.3; 1.3; 1.3; 1.3; 1.3; 1.3; 1.3; 1.3	23.6 - 7.6 - 0.3 2.0 40.3 - 14.4 - 12.8 0.0 41.7 - 8.3 - 3.6 0.9 8.2 8.3 - 3.6 0.9 8.2	49.4 9.7 13.9 14.6	40.0 0.7 - 2.9 13.2 44.7 - 25.0 -27.7 13.2	.2: 3.3: 36.4: - 0.7: 6.2	11.1 37.0 4.4 11.7 5.1 5.1 - 40.7 - 3.4 24.3 24.3 4.3	142.9 - 7.5 3.4 0.0 38.8 - 2.6 3.9 3.6	
10.1	: No. 1:run on net soale:	mmon:	Per: Per: Per : Per : Per : Per : Oent: Oent : Oent	10.4; 78.7 19.1 32.4 0.0 1.1 18.1 28.8 6.4 11.0 22.3 4.7 5.4; 85.0 0.1 6.6 0.0 8.8; 84.4 2.8 5.6 2.9	10.5	6.9: 0.3: 82.8 - 1.8 2.1 2.0		6.6: 0.0: 76.0: - ,7.3: -,5.6: 0.0:	7.6 - 63.9 - 7.2 - 10.5 1.8 7.8 6.1 6.1 6.1 6.1 6.2 6.2 6.0 6.0 6.2 6.2 6.2 6.2 6.3 6.3 6.3 6.3 6.3 6.3 6.3 6.3 6.3 6.3	100.3	21.6 33.7 26.4 58.0 0.0 33.9 31.6 35.3 54.4 0.0	15.11.13.8; 35.7 15.1 35.4 1.1 19.1 3.7; 34.3 6.5 18.6 2.0 11.11.14.3; 37.4 8.0 17.5 7.1 11.11.14.3; 37.4 9.0 19.5 1.3 20.8 38.0 - 12.2 - 6.3 1.0	19.6: 33.6: - 7.6: 0.3: 2.0 22.1: 32.2: - 6.3: -1.5: 7.2 17.9: 40.3: -14.4: -12.8: 0.0 18.2: 41.0: 8.3: -3.6: 8.2 18.3: 28.7: 8.3: -3.6: 8.2	13.6 49.4 9.7 13.9 14.6	53.5 40.0 0.7 - 2.9 15.2 8.4 44.7 - 25.0 -27.7 15.2	3.3: 36.4: - 0.7: 6.2:	11.7:11.1:37.0 4.4 11.7 5.1 23.8:3 11.4: 40.7 3.4 24.3 4.3	16.1: 42.9 - 7.5 3.4 0.0 15.1: 34.3 - 4.3 4.7 3.9 20.7: 36.8 - 2.6 3.9 3.6	
GRADE NO. 1	: grades : Overrun and under : No. 1; run on net scale:		: Per : cent: cent: cent : ce	1.4, 10.4, 78.7 19.1 32.4 0.0 2.2 3.1 2.4 0.0 3.1 2.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2	4.7 4.5 1.7 81.5 0.5 5.8 1.6 1.1 1.1 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2	2.2: 6.9: 0.3: 82.8 - 1.8 2.1 2.0		2.7; 6.8; 0.0; 78.0; - ,7.3; -,5.6; 0.0	2.5; 7.8; -7.5; -7.5; -1.5; 1.8; -7.5; -7.5; 1.8; -7.5; 7.8; -7.5; 7.8; 11.4; 2.5; 2.0; 9.6; 0.9; 80.2; -4.0; 7.5; -4.4; 8.3; 7.5; -4.4; 8.3; 7.5; -4.4; 8.3; 7.5; -4.4; 8.3; 7.5; -4.4; 8.3; 7.5; -4.4; 8.3; 7.5; 7.5; 7.5; 7.5; 7.5; 7.5; 7.5; 7.5	ORADE NO. 3	10.5; 21.6; 33.7; 26.4; 58.0; 0.0; 10.5; 32.9; 31.6; 35.3; 54.4; 0.0; 5.1; 20.8; 12.0; 41.4; 14.3; 34.2; 4.2	6.9; 15.113.8; 35.7; 15.1; 35.4; 1.1; 75: 19.1; 3.7; 34.3; 6.5; 18.6; 2.0; 3.5; 11.114.3; 37.4; 9.2; 19.5; 7.1; 5.4; 20.8;	13.5; 22.1; 33.6; 7.6; 0.3; 2.0; 13.5; 22.1; 40.3; -14.4; -12.8; 0.0; 6.1; 18.2; 41.0; 6.3; -3.9; 6.0; 6.1; 18.2; 41.0; 6.3; -3.9; 6.0; 6.9;	9.7 13.6 49.4 9.7 13.9 14.6	2.6; 33.5; 40.0; 0.7; - 2.9; 13.2; 8.4; 44.7; - 25.0; -27.7; 13.2;	.9: 7.8: 17.2: 3.3: 36.4: - 0.7: 6.2:	11.11.7:11.11.37.0 4.4 11.7 5.1 11.9 23.8 24.3 24.3 4.3 4.3	15.5 16.1 42.9 - 3.5 3.4 0.0 7.7 15.1 34.3 - 2.6 3.9 3.6 10.7 20.7	
	ferent grades : Overrun and under: condition : No. 1:run on net scale:	mmon:	: Per : cent : ce	4.4 10.4 78.7 19.1 32.4 0.0 22.9 4.0 85.4 11.0 22.3 4.7 19.1 5.4 0.0 0.0 0.1 5.4 0.0 0.0 0.1 5.4 0.0 0.0 0.1 5.4 0.0 0.0 0.1 5.4 0.0 0.0 0.1 5.4 0.0 0.0 0.1 5.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	2.3 1.6 2.3 2.3 2.4 5.5 0.5 2.3 1.6 2.3 1.6 2.3 1.2 10.3 2.3 1.2 10.5 2.3 1.2 10.5 2.3 1.2 10.5 2.3 1.0 6.2 2.3 1.	0.1 2.2 6.9 0.3 82.8 - 1.8 2.1 2.0		Average by mills 2.7 6.8 0.0 78.0 - 7.3 - 5.6 0.0	1.1 2.5 7.8 83.9 7.2 11.4 2.5 1.1 1.1 2.0 9.6 0.9 80.2 - 4.0 -1.3 1.1 1.1	LOO ORADE NO. 3	10.5; 21.6; 33.7; 26.4; 58.0 0.0 1.6 10.5; 32.9; 31.6; 35.3; 54.4; 0.0 5.1; 20.8;12.0; 41.4; 14.3; 34.2; 4.2	2.5 7.5 19.1 3.7 34.3 6.5 18.6 2.0 1.7 15.1 35.4 1.1 1.7 15.1 37.3 15.1 1.3 18.6 2.0 1.3 1.3 11.1 11.4 1.3 37.4 9.2 19.5 19.5 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	4.1 10.3 19.6 — 33.6 — 7.6 0.3 2.0 4.3 13.5 22.1 — 32.2 — 6.3 — 11.6 7.2 10.6 8.3 13.5 7.9 — 40.3 — 14.4 — 12.8 0.0 10.0 6.1 18.2 — 28.7 — 8.0 = 8.0 6.0 6.0	9.7 13.6 49.4 9.7 13.9 14.6	2.6: 33.5: 40.0 0.7 - 2.9 13.2 . 8.4: 44.7 - 25.0 -27.7 13.2 .	3 2.9 7.8 17.2 3.3 36.4 - 0.7 6.2	Average by mills 11.7:11.11 37.0 4.4 11.7 5.1 5.1 4.5 11.9 23.8: 34.1 - 4.3 2.2 3.3 6.5 3.1 6.2 11.4 40.7 3.4 24.3 4.3	.5	
GRADE	: grades : No. 1; run on net scale:		: Per : oent :	6.5 4.4; 10.4; 78.7 19.1 32.4 0.0 8.4 2.0; 4.0; 85.4 11.0 22.3 4.7 85.4 1.0 22.3 4.7 6.5 0.2 0.1 5.4; 85.4 0.0 6.5 0.2 0.1 5.4; 84.4 2.8 5.6 2.9	8.9 4.7 4.5 1.7 81.5 0.5 5.8 1.6 6.1 6.1 6.1 6.1 6.1 6.1 6.1 6.1 6.1	0.1 2.2 6.9 0.3 82.8 - 1.8 2.1 2.0		7 12.5 2.7 6.8 0.0 78.0 - 7.3 - 5.6 0.0	8 6.2 - 3.4 4.7 - 83.9 - 7.8 12.5 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8	- 11	34.2 10.5 21.6 33.7 26.4 56.0 0.0 23.4 1.6 10.5 32.9 31.6 35.3 54.4 0.0 20.7 5.1 20.8 12.0 41.4 14.3 34.2 4.2	28.5 6.9 15.1 13.8 35.7 15.1 35.4 1.1 35.9 1.7 35.9 2.5 7.5 19.1 3.7 34.3 6.5 18.6 2.0 35.6 1.7 35.4 35.1 35.4 1.1 35.4 1.1 35.4 1.1 35.4 35.7 15.1 35.4 1.1 35.4 35.7 15.1 35.4 1.1 35.4 1.1 35.4 35.7 15.1 35.4 1.1 35.4 15.1 35.4 15.2 19.5 1.0 35.4 1.1 35.4 15.1 15.1 15.1 15.1 15.1 15.1 15.1 1	32.4 4.1 10.3 19.6 - 33.6 - 7.6 0.3 2.0 27.9 4.3 13.5 22.1 - 52.2 - 6.3 - 14.4 - 12.8 0.0 23.3 24.1 10.6 6.1 18.2 - 41.0 - 8.0	27.3 9.7 13.6 49.4 9.7 13.9 14.6	.5	.9: 7.8: 17.2: 3.3: 36.4: - 0.7: 6.2:	26.5 2.6 11.1 11.7 11.1 37.0 4.4 11.7 5.1 35.5 4.5 1.9 23.8 34.1 - 4.3 2.2 3.3 5.5 5.6 3.1 6.2 11.4 40.7 3.4 24.3 4.3	25.5 — 15.5; 16.1; — 42.9; — 7.5; 3.4; 0.0; 38.9; — 0.2; 10.7; 20.7; 36.8; — 2.6; 3.9; 3.6; 3.9; 3.6;	
GRADE	different grades : Overrun and under.	Common   C	: Per : cent : cen	22.4 6.5 4.4 10.4 78.7 19.1 22.4 0.0 21.5 27.1 19.1 28.8 6.4 21.5 27.1 5.5 2.2 3.1 85.4 11.0 22.3 4.7 27.1 5.5 25.0 85.0 85.0 85.0 85.0 1.0 22.3 4.7 27.1 5.4 85.0 0.1 6.6 0.0 2.9 2.9	28.0 7.6 4.7 4.5 1.7 81.5 0.5 5.8 1.6 37.1 5.8 1.6 37.1 5.8 1.6 5.8 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	.2 28.2 7.7 0.1 2.2 6.9 0.3 82.8 - 1.8 2.1 2.0		31.7 12.5 2.7 6.8 0.0 78.0 - 7.3 - 5.6 0.0	25.8     2.0       25.8     2.0       36.8     6.2       26.1     2.0       37.3     11.0       1.1     2.0       26.0     2.0       26.0     2.0       36.0     2.0       37.3     11.0       2.0     3.0       3.0     3.0       3.0     3.0       3.0     3.0       3.0     3.0       3.0     3.0       3.0     3.0       3.0     3.0       3.0     3.0       3.0     3.0       3.0     3.0       3.0     3.0       3.0     3.0       3.0     3.0       3.0     3.0       4.0     1.1       5.0     3.0       5.0     3.0       5.0     3.0       5.0     3.0       5.0     3.0       5.0     3.0       5.0     3.0       5.0     3.0       5.0     3.0       5.0     3.0       5.0     3.0       5.0     3.0       5.0     3.0       5.0     3.0       5.0     3.0       5.0	- 11	33.7 34.2 10.5 21.6 33.7 26.4 58.0 0.0 25.6 23.4 1.6 10.5 32.9 31.6 35.3 54.4 0.0 35.9 20.7 5.1 20.8:12.0 41.4 14.3 34.2 4.2	28.7 28.5 6.9 15.1117.8 35.7 15.1 35.4 1.1 31.4 35.5 32.5 1.7 30.5 19.1 3.7 34.3 6.5 18.6 2.0 30.5 32.1 1.8 3.5 11.11.4.3 37.4 9.2 19.5 17.5 7.1 36.2 34.8 6.4 20.8 38.0 -12.2 6.3 1.0	26.3 27.9 4.3 13.5 22.1 - 33.6 - 7.6 0.3 2.0 26.3 27.9 4.3 13.5 22.1 - 40.3 - 14.4 -12.8 0.0 23.2 24.7 44.1 10.6 6.1 18.2 - 41.0 - 8.3 - 3.6 0.0 2.2 24.7 44.1 13.3 - 28.7 - 8.3 - 3.6 0.0 0.9	49.4 27.3 9.7 13.6 49.4 9.7 13.9 14.6	28.5 24.1 2.6 35.5 40.0 0.7 - 2.9 13.2 144.7 46.9 6.4 444.7 - 25.0 -27.7 13.2	.4: 31.0: 32.3: 2.9: 7.8: 17.2: 3.3: 36.4: - 0.7: 6.2:	29.9 26.5 2.6 1.9 23.8 - 34.1 - 4.3 2.2 3.3 2.7 35.6 3.1 4.4 11.7 5.1 27.7 35.6 3.1 4.5 11.4 - 40.7 35.7 24.3 4.3 4.3	32.9 38.9 4.0 7.1 15.1 - 34.3 - 4.3 4.7 3.9 37.4 29.7 0.2 10.7; 20.7; 36.8 - 2.6 3.9 3.6	
GRADE	different grades : Overrun and under.		Per : Oent :	16.9 22.4 6.5 4.4 10.4 78.7 19.1 32.4 0.0 17.5 32.6 13.5 2.0 3.1 81.4 16.1 28.8 6.4 15.5 27.1 5.5 4.1 5.4 85.0 - 0.1 6.6 0.0 13.1 34.4 6.5 0.2 0.1 8.6 84.4 2.8 5.0 5.0 5.0	10.9 28.0 7.6 4.7 4.5 1.7 81.5 0.5 5.8 1.6 27.2 3.8 3.8 - 12.1 10.3 - 12.1 10.3 - 12.1 10.3 - 12.1 10.3 10.3 10.3 10.3 10.0 10.3 10.3 10	28.2 7.7 0.1 2.2 6.9 0.3 82.8 - 1.8 2.1 2.0		6.7; 31.7; 12.5; 2.7; 6.8; 0.0; 78.0; - ,7.3; -,5.6; 0.0;	17.2 25.8 2.0 3.4 4.7 83.9 - 7.8 -12.5 1.8 1.8 1.2 3 5.6 6.2 6.1 1.1 - 83.5 - 83.5 - 4.4 8.3 5.6 24.1 7.3 2.0 9.6 0.9 80.2 - 4.0 - 1.3 1.1 1.1	LOO ORADE	33.7 34.2 10.5 21.6 33.7 26.4 58.0 0.0 3.4 23.6 25.4 1.6 10.5 32.9 31.6 35.3 54.4 0.0 3.4 35.9 20.7 5.1 20.8 12.0 41.4 14.3 34.2 4.2	3.1 28.7 28.5 6.9 15.113.8 35.7 15.1 35.4 1.1 2.8 31.4 35.5 15.1 35.4 1.1 3.5 31.4 35.5 15.1 35.4 1.1 3.5 31.4 35.6 1.7 9.0 17.1 3.7 34.7 8.0 17.5 7.1 3.5 30.5 32.1 1.8 3.7 11.114.3 37.4 8.0 17.5 7.1 1.3 36.2 34.8 1.0 6.4 20.8 1.1 35.0 1.2 1.2 1.0 3.1	1.6 30.3 22.4 4.1 10.3 19.6 33.6 - 7.6 0.3 2.0 1.4 26.3 27.9 4.3 13.5 22.1 32.2 - 6.3 -1.5 7.2 0.5 39.3 29.3 29.4 2.5 13.5 22.1 -40.3 -14.4 -12.8 0.0 1.2 1.2 1.4 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3	49.4 27.3 9.7 13.6 49.4 9.7 13.9 14.6	2.8 28.5 24.1 2.0 33.3 40.0 0.7 - 2.9 13.2 44.7 46.9 8.4: 44.7 - 25.0 -27.7 13.2	32.3 : 2.9 : 7.8 : 17.2 : 3.3 : 36.4 : - 0.7 : 6.2	3.1 29.9 26.5 2.6 11.1 11.7 11.1 37.0 4.4 11.7 5.1 1.9 29.4 35.7 4.5 11.9 23.8 34.1 - 4.3 2.2 3.3 7.9 27.7 36.6 3.1 6.2 11.4 40.7 3.4 24.3 4.3	9.1 31.1 25.5 15.5 16.1 42.9 - 7.5 3.4 0.0 0.8 32.9 38.9 4.0 7.7 15.1 34.3 - 4.3 4.7 3.9 0.3 37.4 29.7 0.2 10.7 20.7: 38.8 - 2.6 3.9 3.9 3.6	
GRADE	: Lumber in different grades : No. 1; Trun on net soale: :	: : : : : : : : : : : : : : : : : : :	Per : Oent :	39.4 16.9 22.4 6.5 4.4 10.4 78.7 19.1 32.4 0.0 31.3 17.5 32.5 13.5 8.4 16.9 85.4 11.0 22.3 4.7 46.2 11.7 27.1 27.1 5.5 8.4 11.0 22.3 4.7 36.9 13.1 34.4 6.5 0.2 0.1 8.8 84.4 2.8 5.4 5.5 2.9	42.6       10.9       28.0       7.6        4.7       4.5       1.7       81.5       0.5       5.8       1.6         34.6       10.8       27.1       6.1        7.3        83.8        6.0       0.0	44,4 10.2 28.2 7.7 0.1 2.2 6.9 0.3 82.8 - 1.8 2.1 2.0		39.6; 6.7; 31.7; 12.5; 2.7; 6.4; 0.0; 78.0; - 7.3; -5.6; 0.0;	7.6. 17.2 25.8 8.0 3.4 4.7 31.9 -7.8 12.5 1.8 13.8 12.9 36.8 6.2 5.7 7.8 83.9 7.2 11.4 2.5 38.4 6.1 37.3 11.0 1.1 2.0 9.6 0.9 80.2 - 4.0 -1.3 1.1	LOO ORADE	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	3.9 3.1 28.7 28.5 6.9 15.113.8 35.7 15.1 35.4 1.1 25.5 21.5 32.9 2.5 7.5 19.1 3.7 34.3 6.5 18.6 2.0 2.5 31.4 35.6 1.7 35.4 3.7 34.3 5.7 34.3 5.2 17.5 7.1 35.4 35.5 13.5 36.2 32.4 3.6 3.7 36.7 36.7 36.7 36.7 36.7 36.7 3	1.5 1.6 30.3 32.4 4.1 10.3 19.6 - 33.6 - 7.6 0.3 2.0 4.5 114 26.3 27.9 4.3 13.5 22.1 - 32.2 - 6.3 - 14.4 - 12.8 0.0 0.5 39.3 39.8 2.6 9.3 13.5 22.1 - 40.3 - 14.4 - 12.8 0.0 0.0 0.5 1.2 1.4 1.4 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	49.4 27.3 9.7 13.6 49.4 9.7 13.9 14.6	8.7 2.8 28.5 24.1 2.0 33.3 40.0 0.7 - 2.9 13.2 44.7 44.7 25.0 -27.7 13.2 44.7 25.0 -27.7 13.2	2.4 31.0 32.3 2.9 7.8 17.2 3.3 36.4 - 0.7 6.2	4.0; 3.1; 29.9; 26.5; 2.6; 11.1; 11.7; 11.1; 37.0; 4.4; 11.7; 5.1; 2.8; 1.9; 29.4; 35.7; 4.5; 11.9; 23.8;; 34.1; -4.3; 2.2; 3.3; 5.1; 7.9; 27.7; 36.6; 3.1; 6.2; 11.4;; 40.7; 3.4; 24.3; 4.3;	2.7: 9.1: 31.1: 25.5: 15.5: 16.1: 42.9: - 7.5: 7.4: 0.0 0.6: 0.8: 32.9: 38.9: 4.0: 7.7: 15.1: 34.3: - 4.3: 4.7: 3.9: 1.0: 0.3: 37.4: 29.7: 0.2: 10.7: 20.7: 36.8: - 2.6: 3.9: 3.6: 3.6: 3.9: 3.6: 3.6: 3.9: 3.9: 3.6: 3.9: 3.9: 3.9: 3.9: 3.9: 3.9: 3.9: 3.9	
GRADE	:	11 NO::	Per : Oent :	39.4 16.9 22.4 6.5 4.4 10.4 78.7 19.1 32.4 0.0 31.3 17.5 32.5 13.5 8.4 16.9 85.4 11.0 22.3 4.7 46.2 11.7 27.1 27.1 5.5 8.4 11.0 22.3 4.7 36.9 13.1 34.4 6.5 0.2 0.1 8.8 84.4 2.8 5.4 5.5 2.9	10.9 28.0 7.6 4.7 4.5 1.7 81.5 0.5 5.8 1.6 27.2 3.8 3.8 - 12.1 10.3 - 12.1 10.3 - 12.1 10.3 - 12.1 10.3 10.3 10.3 10.3 10.0 10.3 10.3 10	.2 28.2 7.7 0.1 2.2 6.9 0.3 82.8 - 1.8 2.1 2.0		6 4 39.6 6.7 31.7 12.5 2.7 6.8 0.0 78.0 - 7.3 - 5.6 0.0	7 27 26.9 17.2 25.8 8.0 3.4 4.7 81.9 - 7.8 12.5 1.8 1.8 12.9 36.8 6.2 5.7 1.1 33.8 12.9 36.8 6.2 6.1 1.1 6.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1	LOO ORADE	2 33.7 34.2 10.5 21.6 33.7 26.4 58.0 0.0 4, 4, 6, 3.4 35.9 20.7 5.1 20.8 12.0 41.4 14.3 34.2 4.2	7 3.9 3.1 28.7 28.5 6.9 15.113.8 35.7 15.1 35.4 1.1 14.9 2.5 2.8 31.4 35.8 1.7 35.1 35.7 34.3 6.5 18.6 2.0 14 2.5 3.8 31.4 35.1 1.7 35.1 1.7 36.7 36.2 32.1 1.7 37.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1	8 1.5 1.6 30.3 32.4 4.1 10.3 19.6 33.6 - 7.6 0.3 2.0 8 1.5 1.4 26.3 27.9 4.3 13.5 22.1 32.2 - 6.3 -14.4 -12.8 0.0 5 39.3 39.8 2.6 9.3 7.9 40.3 -14.4 -12.8 0.0 5 39.3 24.9 10.6 6.1 18.2 41.0 - 8.3 - 3.6 8.2 8.2 8.4 13.3 28.7 - 8.0 - 8.0 6.9 8.0 0.9	1 — — — — — — — — — — — — — — — — — — —	1 8.7 2.8 28.5 24.1 2.6 33.5 40.0 0.7 - 2.9 13.2 1 1 1 1 14.7 46.9 8.4 144.7 - 25.0 -27.7 13.2	1: 2.4 31.0 32.3 2.9 7.8 17.2 3.3 36.4 - 0.7 6.2	7 24 4.0; 3.1 29.9 26.5 2.6 11.1 11.7 11.1 37.0 4.4 11.7 5.1 25.2 23 2.8 1.9 29.4 35.7 4.5 11.9 23.8 34.1 - 4.3 2.2 3.3 2.2 14 5.1 7.9 27.7 36.6 3.1 6.2 11.4 40.7 3.4 24.3 4.3	.2	
GRADE		: : : : : : : : : : : : : : : : : : :	Per : Oent :	7 31.4 16.9 22.4 6.5 4.4 10.4 78.7 19.1 32.4 0.0 7 31.3 17.5 32.6 13.5 2.0 3.1 81.4 16.1 28.8 6.4 7 34.2 11.7 27.5 8.4 2.0 4.0 85.4 11.0 22.3 4.7 7 46.2 11.7 27.1 5.5 4.1 5.4 85.0 - 0.1 6.6 0.0	42.6       10.9       28.0       7.6        4.7       4.5       1.7       81.5       0.5       5.8       1.6         34.6       10.8       27.1       6.1        7.3        83.8        6.0       0.0	44,4 10.2 28.2 7.7 0.1 2.2 6.9 0.3 82.8 - 1.8 2.1 2.0		6 4 39.6 6.7 31.7 12.5 2.7 6.8 0.0 78.0 - 7.3 - 5.6 0.0	7.6. 17.2 25.8 8.0 3.4 4.7 31.9 -7.8 12.5 1.8 13.8 12.9 36.8 6.2 5.7 7.8 83.9 7.2 11.4 2.5 38.4 6.1 37.3 11.0 1.1 2.0 9.6 0.9 80.2 - 4.0 -1.3 1.1	LOO ORADE	2 33.7 34.2 10.5 21.6 33.7 26.4 58.0 0.0 4, 4, 6, 3.4 35.9 20.7 5.1 20.8 12.0 41.4 14.3 34.2 4.2	3.9 3.1 28.7 28.5 6.9 15.113.8 35.7 15.1 35.4 1.1 25.5 21.5 32.9 2.5 7.5 19.1 3.7 34.3 6.5 18.6 2.0 2.5 31.4 35.6 1.7 35.4 3.7 34.3 5.7 34.3 5.2 17.5 7.1 35.4 35.5 13.5 36.2 32.4 3.6 3.7 36.7 36.7 36.7 36.7 36.7 36.7 3	8 1.5 1.6 30.3 32.4 4.1 10.3 19.6 33.6 - 7.6 0.3 2.0 8 1.5 1.4 26.3 27.9 4.3 13.5 22.1 32.2 - 6.3 -14.4 -12.8 0.0 5 39.3 39.8 2.6 9.3 7.9 40.3 -14.4 -12.8 0.0 5 39.3 24.9 10.6 6.1 18.2 41.0 - 8.3 - 3.6 8.2 8.2 8.4 13.3 28.7 - 8.0 - 8.0 6.9 8.0 0.9	1 — — — — — — — — — — — — — — — — — — —	71 1 + +4.7 46.9 8.4; 44.7 - 25.0 -27.7 13.2	1: 2.4 31.0 32.3 2.9 7.8 17.2 3.3 36.4 - 0.7 6.2	19.7 24 4.0; 3.1 29.9 26.5 2.6 11.1 11.7 11.1 37.0 4.4 11.7 5.1 15.2 14 5.1 7.9 29.4 35.7 4.5 1.9 23.8 34.1 - 4.3 2.2 3.3 15.2 14 5.1 7.9 27.7 36.6 3.1 6.2 11.4 40.7 3.4 24.3 4.3	.2	





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	Ties tand term	2.3	%.o.i.lo	<u> </u>			,	≠°°	111.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0	4.3	2.5. 2.6.	
1.	No. 3 B:	A PUNA CONTRACTOR	ららうさせ	らっちょう	www.w.v.	±.3	111e	4 000 0 0 000 0 000 0 000 0 000 0 000 0 0	%,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0	13.6	25.00 20.00	
GRADE NO	No. 3A:	013.00 of the control	₩# ai+a ai+rws	0400H	40 10 1	2.2	ge by	0.000000000000000000000000000000000000	00 mig	9.5	000000000	
10 00 T	rent & nditio	Per Cent	11111	11111	11111		Avera	1111111	+       0,0   1,4   1,1   0,0   1,1   1,	1.7:	3.1.2.3.3.8.9.9.	
	n difference reence No. 20:	Per cent 11.9 19.9	*************************************	04.00°C	2002 2007 2007 2007	20.		747.96.97.7 1.47.69.57.7	nogana marka arrea kata noroa rreiri nevrai mani	32.4	9,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0	
	unber 1 in g	47.55.4.4.5.4.4.5.5.4.4.5.5.4.4.4.5.5.4.4.4.5.5.4.4.5.5.4.4.4.5.5.4.4.5.5.4.4.4.5.5.4.4.5.5.4.4.5.5.4.4.4.5.5.5.4.4.4.5.5.5.4.4.5.5.5.4.4.5.5.5.4.4.5.5.5.4.4.5.5.5.4.4.5.5.5.5.4.4.5	3323	33333	272878 800000	32.4		8688888 5688888 568888	రనినిల్లు జాబ్బర్వ బడ్డాలకు శనివాన రంగామాలు ఈంగాగా ఉంగాలు	29.0	%%#%% %%#%% %%#%% %	
		Per cent 14.0 16.4 16.9 12.3	10.8	- 0,000 H	was wa www.r-u	9.7		200 m 12 12 10 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	o a no a a a a a a a a a a a a a a a a a	4.9	W4.4.00 0.4.8.8.8.00	
	σ <b>«</b>	Per cent tho.2 36.8 8.8 8.8	<b>K3K7.</b> -400-	4.7.25. 2.0.0.4	47.6 47.6 47.0 47.0 47.0 47.0 47.0 47.0 47.0 47.0	42.7		できずれる。 ないしょう		4.9	るでははずいの	
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		and under- net scale	Doyle	Per	30 16:2 17:1 6:6	4 way 9	- +	#1144 41144	6.0	00400 84004	2000 2000 2000 2000 2000 2000 2000 200		11.7	182774 282774 700.00	- 3.5	11.00 W	
		run on n	or1bner:	Per cent :	3.80.8. 1.3.6.1.6.	ดอดเนล นะละกับเ	MUSSING	₩ 0 4 10 0 10 10 10 10 10 10 10 10 10 10 10 1	4.7	00war wwa41	13.00	000+0	25.51 25.57 25.57	881448 683288 187687	40 در	1.0.8	
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G GRADE		B 1	O 8	Per Properties	28288 26435 66435	227118 5.5.5.1. 1.5.5.1.		19.2:		115 68 by	GRADE N 44.5: 34.4: 23.5: 36.0: 1			46.55 36.4: 12 34:4: 12 32:12: 25 1: 13	38.2:	86 by	
roc		ondit	No. 1	Per : Per : o	10040	, 20 0 00 00 00 00 00 00 00 00 00 00 00 0	.0.6.4.4.0.	111771 4.50.00:4:	6.9: 17	11.1.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.	20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		04000	25   1	5.1:3	4 50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	- 1	green o	α μ α μ α μ α μ α μ α μ α μ α μ α μ α μ	Per : 1	0011/2	~	±-ion=		3.6	ww.m≠.w ••••••••	,	מושל יור	מיס=+ ר-	118111	 ⊅. Q	00.00 60.00	
			Select Red : S	Per : Bent		다 ! 다 O O 다 O SO 다	004 i u v.s. i o	0404 <i>0</i> <b>LONN</b>	9.0	10000 10000 100010	•• •• •• •• ••			ون د	0.2	9.0	
				Per : Per :	######################################	'	· · · · · · · · · · · · · · · · · · ·	25.65.6.	48.1:	443.7 551.6 344.6 36.6	96~%	00000		₩₩ ₩ ₩ ₩		74 WU 1-8000	
		i	Fed	Par : Pe	1111		100,200 100,20		<b>1</b>	40040		7.00		04         	0.3	0.7	
		No.:	10gs:	•• •• •			1748	<b>⇒</b> ₪	199	7-61	21.25	254496 25444	0 L 200 L	\$ WWHHH	132	7272 7474	
		Diameter	inside bark	Inches	200	ຊສກ <sub>ະ</sub> ສຸສ	37,882,8	2%¥%3		25.6 19.6 22.5 22.5 6				230 230 330 341 350	20.2	20 20 20 20 20 20 20 20 20 20 20 20 20 2	
			Der ber	** **	A11 :: mille: " :		****		Aver-: age if all:	ころサトの	A11		****		Aver-: age of all	0 m L 80	



Table 6 -- Red gum, second-growth -- Percentage of lumber by grades, overrun, and defect by log grades

	Volume in each	or log grade lumber	Per	1100.5 1100.5 1100.5 1100.5	113.1	18.3	88.1	2001 2000 2000 2000 2000 2000 2000 2000	119 979 11.0	15.0	19.2
		Defect:	Per cent	000000	0000	2.1 : 1	2.7 : 18. 0.0 : 18.	12.5 0.0 1.0 1.0 2	22.5	3.5	3.7
	under-:	• •• •• •• •• }		041000	~510		×o →		w∞rv	٠	
	and	Doyle	Per	103330 44450	94.90	14.4	20 8.4.	147.7 59.2 39.7 52.4 52.4	82.42	30.2	31.9
	Overrun run on	Scribner	Per	1.22 1.22 1.23 1.23 1.23 1.23 1.23 1.23	22.0	4.6	1.4	25.11 2.6.5.8 2.8.8	4 K.T. 6.75.6	10.7	10.9
	0: -		Per	\$555. \$4. \$4. \$555. \$4. \$4.	78.7 63.3 	9.99	67.4	111.5	13.1 17.0 19.9	12.9	12.6
		Common and No.30:Better	Per : F	10.15	3.5.4. 3.5.4. 6.4.	t.0:	3.7:	10000	25.1	5.7: 1	5.6:1
2		S S		28444 4444 66666	18.9: 29.4: 25.0:	27.0:	2 25.7 30.6	100.0: 67.1: 79.9: 51.6:	77.9:	65.2:	64.7 72.9
DE NO.	1 m	No. 2			11.0.14	 ∓.	i ii	DE NO. 32.9: 20.3: 14.0:	33.9	16.2:	B
LOG GRADE	t grad	0 80		23.7 221.13 28.7 28.7	# # # # # # # # # # # # # # # # # # #	27.0:	29.4: 3. 20.3:	LOG GRADE NO 32.9: 10.0: 28.9: 8.9: 30.3:	13.1:	10.01	Average by 10.1: 17. 8.7:
	in different grades green condition	No. ]	Per :	11151	7.6	# #	6.1	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	119	1.6	1.6
		ote San	Per oent	161 7.51 7.51	28.7	7.3	6.5	11111	0	0.1	0.8
	Lumber	Selects	Per		11.8	7.7	1.9	1111			11
				888888 2000011	20.4	22.3:	34.8	1.00	13.9	1.2:	9.7
		F. F.	1		10.8:	±.	5.7:	11111			11
	2	loge.		HWWW		56	19	anrnr	гита 	32	Ε. Ι.
	1 4	naide	Inches	24527 24527	10 20 25 25	16.8	17.1	4725	15 17 18	13.8	13.6
	Mill :Dia			All mille:	====	Average solution age solution allies	ar	A11 :: #1118 :: #		Aver-: age: of all: mille:	0 K
				• •• •• •• •• ••							
	Volume : In each		Per	11.3 17.9 13.18	00 n w so 00 n w so 00 n w so	35.7	28.5	0 12.7 12.0	33.7.0 1.1.1 3.5.1.3.3	31.0	34.2
		Defect	Per	000040 041004	0000	1.3	1.4	33.3 16.7 0.0	0.000	1.6	1.9
	Overrun and under- run on net scale	Doyle	Per	24. 27. 20. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	30.06	3.6	4.3 19.8	133 250 250 250 250 250 250 250 250 250 250	16.5 16.8 27.9 27.9	22.3	20.5
	Overrun and run on net	ner:		· · · · · · · · · · · · · · · · · · ·			!. #				
		Scribner	Per	18:5 - 00:7 - 6:51	- 33.6 - 17.8 - 17.8	- 2.7	- 10.6	% % % % % % % % % % % % % % % % % % %	- 20-79 t	11.11	27.9
	, ch	Common and No.30 better	Per	27 29 29 25 25 25 25 25 25 25	85.2 98.0 97.7	67.9	93.9 78.9	£51.986	52557 786987	16.7	45.6 51.3
	; ; ; ;	No.30	Per	6.6 6.6 6.0 7.1	6.2	2.7:	5.8:	1 10 000	4 wwo	3.2	4.0
7	 	2 2	.	179 150	80.4.0 0.4.0.0	9.3	118 15.3	773 773 773 773 750 740 750 750 750 750 750 750 750 750 750 75	73777 7377 7377 7370 730 730 730 730 730	148.7	118 49.5 44.9
DE NO.	ades	0 0 0	. !	1 10 1 1	1111	0.1:	by mill 0.3:	DE NO.	110.1	1.4:	by #11
LOG GRADE NO.	in different grades green condition	0 1	. !	200.1 200.1 290.3	16.9 11.0 1.9.0 3.0	19.0:	Average by 22.4:	LOG GRADE NO 25.7 29.9 146.3 36.1: 3.6 36.3:	2855 8855 711 + 66		Average by mills 34.2: 1.5: 4: 5.1.5: 4
	differ differ	0 0	Per	5.7	2:1	1.5	٠ ۲	11111	0.3	1.4	1.7
	Lumber in in gr	Selecte Selecte	Per	11 69.75 7.655	37.60	 %	10.0	11444	アラコキョ		4.4
	Lum	Sel	Per	11111	1111	1	11	11111	11111	ŀ	
		S. S.	Per	5,500 6,000 6,000 6,000 6,000	57.5 39.3 89.3	59.3	59.0: 59.6:	1112	2007 2007 2009	7.3	16.3
		F.A.	Per		- - -	0.1	0.1	11111	11111		
	H.	10ge		WIV200 IV	~		23	0		∄	37
	Olameter ineide	berk	Inohes	16 17 19 20	2548	19.5	20.1 18.5	24.4.4.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5	11 11 12 13 13 13		16.1
	Mill	ber		All mille:	====	Aver- age of all: mille:	3.6	All : Bille: " : " : " : " : " : " : " : " : " : "		Aver-: age of all: mille:	am



	lume	or log grade lumber tally	Lital	<i><b>DUNIA</b></i>	~06n~	4.80 1.70 1	#1111			42611		_		
	th of	ct: Or Ser	Per		8.7 9.0 111.3	F   F   K	4.1111	19.1	19.0	.38.7 7.88.7		0 : 1.7	0 1.7	
		Defect	Per	4.00.4	2001 1000 1000	4.17	31111	3.1	0.0	0.0		7.0	7.0	
	and under- net scale	Doyle	Per	42.12 231.8 1.2 5.2	-14.8 -14.8 -14.6	-28.7 -30.4 -24.0	-39.3	-15.2	-14.9	11.2		13.6	13.6	
	Overrun run on	Scribner	Per	123.2	- 1 280.3 - 1 9.8 - 15.6	- 28.7	- 37.4	- 19.4	- 19.9			2.6	2.6	
	 5	Common and better	Per	55.7 72.6 70.3 69.1	866.12 85.55 85.55	88.3	91.4	78.4	78.5	13.6		17.1	17.1	
NO. 2	œ	No.3 G	Per	404.14	8.001	3.4		0.0	2.0 0.0	5.52 17.55		9.4	9.4	
GRADE	nt grad	No.2 G	Per	27.4 27.3 27.3 25.5	2000 2000 2000 2000 2000	11.4	9	19.6	age by 19.5	GRADE NO 80.9 75.4 65.0		73.5	Average by .4 73.5	
LOG	in different grade green condition	0	Per	27.7 40.8 41.8	61.6 26.9 27.1 49.3	54.1 60.7 64.3	54.9	t.9t	46.3 50.3	13.6 22.3 8.1		13.4:	13.4	
	Lumber in dis	Selects:No.1	Per	12.0 0.0 7.1 11.0	110.75 10.75 10.75	13.3	13.1	10.6	10.9					
	ក្សា	σ •	Per	31.8 21.4 17.4	22.4 27.6 17.8 21.0 22.8	20.9	23.4	21.4	21.3			3.7	3.7	
		of ::		mam   a	mmam±	0 H   H		3	29	онн			#	
	+ 0 20 20	inside	Inches	11111 87657	19 20 22 23	25	53	20.3	20.5	199		15.6	15.6	
	ייייייייייייייייייייייייייייייייייייייי		•••••	All	= = = =	=====	=====	Average of all:		A11 : mills: "	= = = = {	age of all:	8 1	
	Volume :	or log grads lumber tally	Per	00 L 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	201.20 201.20	47740	7.55 2.55 3.05	9.79	68.3	12.6 17.6 14.6	との 4. だんでい 4. だんでい	11.6	11.0	
	•••••	Defect	Per	18.2 0.0 6.2 1.7	004 00 000 00	0.04 0.000 0.000	0000	o R	2.5	0.0 10.0 0.04+3 0.07-4-3	0.000.00	6.88	10.0	
	and under-:	Doyle	Per	774 % 77. 78. 78. 0 8. 6. 74. 8	2011-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	1.24. 1.24. 1.26. 1.26. 2.56. 2.56.	-27.2 -31.1 -25.0 -35.5	-19.6	-19.6	22.25 12.25 12.20	10.29 10.29 10.29 12.09 1.29 1.29	۵. 0	- 2.7	
	Overrun run on	Scribner	Per	77.00 6.1.00 6.1.00	-14.3 -21.5 -23.1 -28.8	-19.1 -34.4 -37.6 -29.9	-25.4 -14.1 -28.3	-21.2	-29.6	000000 000000 000000	-29.4 -26.8 -20.8	- 7.0	2.9 -	
	ر د د	nd nd ter	Per	28.78 88.3 88.3 98.5 9.6	94.3 92.8 93.5 95.5	957.5 1.0 4.57.2	7.7.7. 986. 7.7.7. 8.	93.4	93.5	72.6 51.8 51.6	56.7 76.2 91.1 64.3	57.0	56.4	
E NO. 1	80	No.3 G	Per	キュラシュ めてこうめ	96,00	136.17	95.19	1.3	1.2 : 1.0 : 1.0	E NO. 3 4.2 7.4 7.5	1010 18.5.8.8.	6.2	6.7 6.0	
LOG GRADE	nt grad	No.2 C	Per	12.0	เกเกเกรร นี้ เก่ากับเล	104 WW4 20 W.O.O.O.O.	ดพ <sub>เ</sub> พเพเพ น <sub>ะ</sub> ต่อม <sub>ั</sub> ฒ่	5.3	15.0	.00 GRAD 63.2 49.6 35.7 35.9 48.3	23.27 23.03 20.03 20.03	36.8	Average 36.9 35.1	
Ч	differenten condi	No.1 C	Per	1186.9 116.9 12.0 12.0 14.0 16.0 16.0	2002 2002 2003 2008	26.0 27.9 28.1 9.3	2000 2000 2000 2000 2000	25.2	22.1 35.0	28.7 36.0 728.6 77.8	84468	43.9	42.9 57.0	
	Lumber in in gre	Selects	Per	10.00	0.4 0.0 € 0.4 0.0 €	747.67	00000 00000 00000	7.	≈.r. 4.0.	22.7 11.4 6.7		7.1	7.6	
	นา	F. A	Per	53.03	55.00 55.00 55.00 55.00 55.00	53.7.5 7.5.5 6.6.6	77.8 64.1 77.7 81.4	62.8	63.0	~~~~~ ~ ``` `` ``` ``	0/800 04000	6.0	7.9	
		of of second	•• •• •           •• •• •	コトロトト	コカトのい	MUMHM	 Ф#НПН	62	78	ntuth		22	21 : 1	
		inside :: bark ::	Inches	11111	23 23 23 23 23	\$2555 \$255 \$355 \$355 \$355 \$355 \$355 \$355	20 Hrv	23.2	23.2	11111 4706/2	2010 2010 80 40 80 80 80 80 80 80 80 80 80 80 80 80 80	18.2	18.1	
	i	num-		A11 ::	trer=	====	====	Aver- age of all: nills :	2 7	(11 m1118 "	= = = = =	AVBI- 868 of all: mills:	2 /	

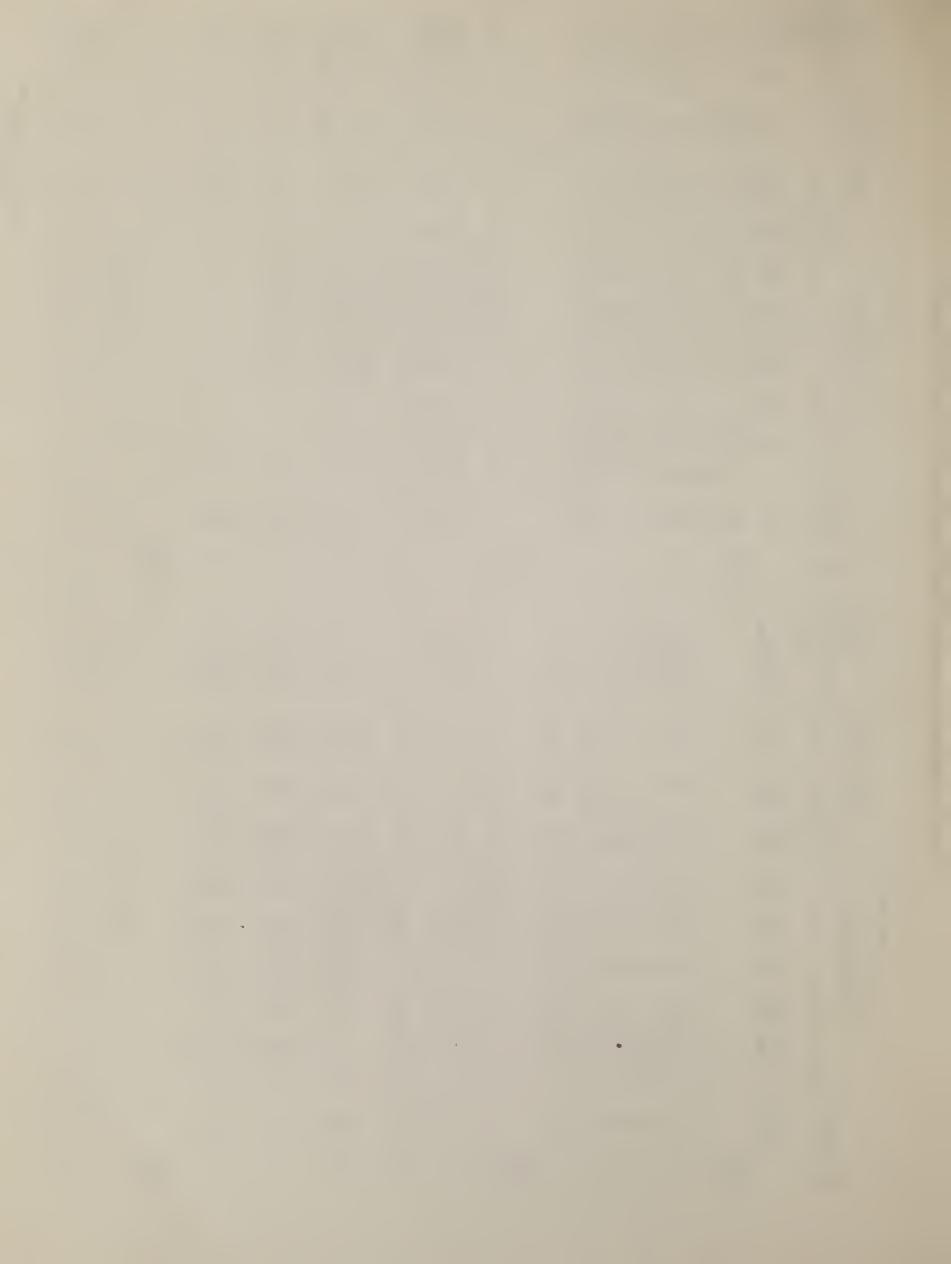


Table 8 .-- Green and white ash -- Percentage of lumber by grades, overrun, and defect by log grades

	ioh ch	log le le y						
	Tolume in each		Per	0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	:33.4	2002 2003 2008 2008 30	4.1 12.7 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1	3.2 6.1 5.3
		Defect	Per	0000470000	6.1	0 W 80 7 W 41 60 0	000747000	27.2
-	and under-	Doyle	Per	11 10 10 10 10 10 10 10 10 10 10 10 10 1	27.8	26.0 20.2 44.6 31.0	44 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	20.0
	Overrun s	Scribner	Per	1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	13.5	11.4 10.6 21.0 17.3	# # # # # # # # # # # # # # # # # # #	50.8
2	" " "	Common: and better	Per	6474 @26778490 77761 646646669	65.1	63.5 71.8 71.0 65.0	20.12 20.12 10.10	18.1
DE NO.	w	No.3 G	Per	100   100	16.8	20.1 8.1 4.9 15.6	E NO. 4	31.9 46.6 35.9
LOG GRADE	ferent grade	No.2 G	Per	27.00 27.00 27.00 27.00 27.00 20.00	18.1	16.4 20.1 24.1 19.4	10G GRADE 65.1 54.5 65.8 65.8 65.8 65.8 65.8	50.0 144.7 147.5
	differe	No.1 G:	Per	64712 64712	29.8	27.7 28.2 26.1 35.8	29.29.29.29.29.29.29.29.29.29.29.29.29.2	17.8 16.6
	Lumber in free free free free free free free fre	Seleots	Per	2012 1 1 0 2 1 0 2 1 0 2 1 1 1 1 1 1 1 1	±.	5.5.5 5.4.5.5 5.4.5.8		5111
		Α	Per	200082009999900 2000827099901 20007770108179990	26.9:	28.5 30.2 26.2 21.4:		
		of logs			86	77	1   1   1   1   9	r   mo
		inside bark	Inches	22222	15.6	15.9 17.1 15.7 15.6	13.5	13.4
	Mill Di num- 1		• •• •• •    -     • •• •• •	A1118	age of all: mills:	чи <b>4</b> го	All # # # # # # # # # # # # # # # # # #	HW7#0
	Volume:	or log grade lumber tally	Per		30.7	26.4 37.5 37.5	00117111 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	25.6 195.6 36.6
		Defeot	Per		3.4	400% 7000 7000	25.00 1.00.00 1.00.00 1.00.00 1.00.00	10.00
	and under-:	Doyle	Per		16.9	15.7 17.3 18.4	るで444と1 11 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	22.5 47.5 32.3
	Overrun andrun on net	Soribner	Par		9.5	6.5 10.0 22.8 9.9	250.0 11,00.0 10,00.0 10,00.0 10,00.0 10,00.0 10,00.0 10,00.0	22.6 22.6 23.1 13.9
	" "	Common and better	Per		4.62	77 75.5 813.0 4.	440000001 10100	550.7
NO. 1	le 8	No.3 G	Per		10.1	7 mills 13.4 9.2 8.9	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	24.3 45.2 6.8 19.2
GRADE	different grade	No.2 G	Per		10.5	erage by 15.3 16.2	68 4 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 9 9 9	30.7 13.1 42.9 29.7
LOG	1 40	No.1 G	Per	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	19.6	19.4 12.1 15.7 21.3	2 422 42200044 2 422 72200044 1 623 04020044	30.7 36.1 43.7
	Lumber in in gr	Selects	Per		6.1	7.5 1.5.7 2.5.5	0   worwy 1   oww + r	4 W 0 4
	Lu	μ. Ε.	Per		51.7	50.5 57.7 52.3	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	10 10 10 10 10 10 10 10 10 10 10 10 10 1
		of 10gs		\u\u\10\u\u\u\a	57	24 1 25	1100 1100 1100 1100	50 22 -14
		unameter inside bark	Inches	0102472411100000000000000000000000000000	17.5	18.4 19.0 16.0	11 11 12 12 13 14 15 15 16 17 17 18 18	175.0
	•• •• •	MILL Dumber		A11 :: #1118: #118: #118: #118: #1118: #118: #118: #118:	age of all:	HW# 80	All # # # # # # # # # # # # # # # # # #	LW780



	Volume in each	or log grade lumber tally	Per	10 W/0 7.04. W.8.	10.01 10.03 10.05 10.05	で4.0 o.w ぉ゚ o.o. で.ぉ゚		30	34.74 2.60.09.3 4.2.5	20.00 20.00
		Defect	Per	~#000 ~#000#	0 111 04 - 0 4 7 8	20.4 20.4 20.00.00.00.00.00.00.00.00.00.00.00.00.0		9.2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000 1100 1411 100 141 100 140 140 140 140 140 140 140 140 140
	and under- net scale	Doyle	Per	#03 E0 #8. #5. #5. #5. #5. #5. #5. #5. #5. #5. #5	26.0 14.0 14.3	1 11 81110 8.50 9.50 9.50 9.50		5.1	11/4 Wal 0 w 0 w 0	200 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Overrun a	Soribner			15.59		•• •• ••	. 2.5	210217 2027-7	21.6 7.7 7.7 11.6 11.6 11.6 11.8
	, , , , , , , , , , , , , , , , , , ,	1 H   B			4,000,00	•• •• •• •• ••	•• •• ••	63.6	1900 100 100 100 100 100 100 100 100 100	7.00 0.01 4.4   1   1.00 0.01
DE NO. 2	des	No.3 G	Per	123.0	12.2	120.01 150.02 20.00.08		13.9	13.9 13.7 15.0 16.2	26.2 26.2 26.2 20.4 41.0 20.0 20.0 26.0 26.0 26.0 26.0 26.0
LOG GRADE	Ifferent grade	G:No.2 G:	Per	23.75 23.56 23.16 23.16	802400 80400	23. 23. 14. 26. 1. 26. 1. 26. 1. 26. 1. 26. 26. 26. 26. 26. 26. 26. 26. 26. 26			<b>A</b>	00 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	in differ green cor	No.1	Per	30.6 30.1 42.1 36.1 36.1	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	94497 900000		32.6	2222 2422 38766 38766	115.55 115.7 12.0 12.0 13.0 15.0 15.0 15.0
	Lumber 1 an 8	3:Selects:			49748			6.0	トレビルで サレシがす	
	1	. α. Ε.		2000 2000 2000 2000		47.0001 40.0001 40.0000			20.02	
		logs 10gs	mî		111111		•• •• ••	: : 6 : 101	0 00 0 00 00	00 04 10
	Diamete	inside bark	Inche	27777	11 13 13 13 13	82458		18.	00404	0112124
	LLIM	num- ber	•• •• •	A11 #1118	****		•• •• ••	Aver- sege of all	0m4r=10	A A A A B B B B B B B B B B B B B B B B
	Volume in each:	or log grade lumber tally	Per sent	9.	10.59	21.00.0 1.00.01	801 4.00	39.4	47.7.4 285.5 11.6	1 1 1 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	•• •• •• •• •• •• •• •• •• •• •• •• ••	Defect	Per		ריטידיעה הטידיעה	11 4.0.0.4 5.00.79	17.1		3.7	0   1   1   1   0   0   0   0   0   0
	and under- net scale	Doyle	Per	19.5		1,32.7	15.0	- 2.1	14.55	1
	Overrun e	Soribner	Per	7.2	11 11/4/11/17 0000/0	- 8.1 -7.1 -11.2 -11.6	- 8.5 -12.0 -37.0	4.9 -	0.0 0.0 0.0 0.0 0.0	2   1
			Per	78.7	78.77 77.03 79.03 79.03	88886 82000 80000 80000	87.4 91.3 78.5	81.1	81.6 79.0 83.0	だ   日 た だ だ
DE NO. ]	des	.No.3 G	Per	11.0	01 00 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	807-7-0 80-17-1-0	0,0,0, 0,0,0,	7.5	6.4 11.6 6.2	DE NO. 12. 1.3
LOG GRADE	ent grade dition	. No.2 G	Percent	10.3		101101101101101101101101101101101101101	10.4 6.1 19.2	4. LI :	12.0 9.4	10 G GRA 43 G G GRA 45 G G GRA 45 G G G G G G G G G G G G G G G G G G
	n different reen condit	: :: ::	Per			2001	25.7 16.8 18.4	. 22.2	20.6	# # # # # # # # # # # # # # # # # # #
	Lumber in in gre	:Selects	Per		10000		<del>.</del>	7.8	7.57	
	ii	. A. A. S	Per	 4 %.		47774 00000 100044	59.1 72.6 45.9	51.1	25 5 5 5 5 5 5 5	
		10gs			7 11 4 WY FY 8 109 60 5		10.00	11 170 77 11 1170 470 877 877 10 10 10 10 10 10 10 10 10 10 10 10 10		
	To to moto	inside bark	Inches	16	17 19 20 20 21	882 882 882 882 883 883 883 883 883 883	288	21.5	22.1 19.7 19.3	111 142 143 143 143 143 143 143 143 143 143 143
	1117	per ber		A11 m1118				Aver- age of all mills	aw r	A A Vet -   H1118



	Volume n each lameter	or log grade lumber tally	Per	น พ.ช. ช. ช. ฆ ช ๋ ๋ ๋ ๋ ๋ ๋ ๋ ๋ ๋ ๋ ๋ ๋ ๋ ๋ ๋ ๋ ๋ ๋	7,0004 8,10,000			28.3	8.5 5.3	2011 2017 2017 2017 2017		1.8	1.1 4.1 7.7
		Defect:	Per	7. 4. 4. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6.	4.0000 4.0000 7.0000			9.4	4.2 :27	0.00%		g. 20	6.7
	net scale :	Doyle	Per	247. 24.00 12.05. 12.05.	1 1 1 8 4 4 6 6 9 6 9 6 9 6 9 6 9 9 9 9 9 9 9 9			15.2	18.9	241 7.24.0 7.80.0 1		7.7	44 0.50 0.00
	Overrun run on	:scribner:	Per	116.8 2.7.9 2.7.9 2.7.9	- 1 - 1 - 2 - 2 - 2 - 5 - 2 - 4 - 5 - 5 - 2 - 4 - 5 - 5 - 2 - 4 - 5 - 2 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5			5.9	8.8 -16.1	27.5 1.0 -10.5 - 2.0		<b>60</b>	- 1.4 -27.5 -10.5
	No. 1	Common: and: better:	Per	665.00 66	25275 25275 25037.80		11111	68.2	67.2 78.4	24.1 15.0 24.3 19.0		20.5	18.2 24.1 24.3
NO. 2	ades	:No.3 C	Per	8446R 0/0/0/0/0/	20001 20001			6.2	mills 6.4 5.2	NO. 4 00.0 346.3 30.4		27.2	30.0 34.3
GRADE	t gr	No.2 C	Per	200 200 200 200 200 200 200 200 200 200	22.22 23.25 18.25 18.39 18.39			25.5	Average by .5 26.4	GRADE 175.9 57.0 41.4 50.6		52.6	ÿ ≈ 0.4
LOG	differenten condi	No.1 C	Per	22.25.3 26.3 27.2 25.4	37.0			29.1	Ave. 27.5 43.9	24.1 12.2 24.3 11.3		15.7	Average 11.4 51 24.1 75 24.3 41
	Lumber in in gre	elects:	Per	20.7.11.7.11.7.11.7.11.7.11.7.11.7.11.7.	11.67.7.6.7.			9.1	9.1	0%001		ņ	
	Lum	e- Ω. Ω.	Per :	33317.55	26.0 27.1 17.4 17.6			30.1:	30.6: 25.6:	0.00		4.2	6.3
		of :	•• •• • •	11 10 12 7	rvÖ∓ wa			99 ::	99	4440		ľ	MHH
	Diameter	inside bark	Inches	11111	19 22 23 23			17.9	17.7	13 14 19 		17.8	19.1 13.0 19.0
		num- ber	•• •• • • • • • • • • • • • • • • • •	A11 :: #1118: #				Aver- age of all: mills	2	All mills: "		age of all mills	740
	Volume in each: diameter:	or log: grade: lumber: tally:	Per	11.5 2.6 11.5 5.11	13.7 10.1 8.6	いせんとう	uuina ossava	54.8	57.2 32.8	2055 1770 170	7.1.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.	15.1	13.2 71.8 30.2
		Defect	Per	0.54.00	97.19 4.19.00	#.0.0.0 0.00	0.0 0.0 15.2	6. 0	3.0	13.3 6.0 10.5	1000000 1000100	6.0	5.5
	and under- et scale	Doyle	Per	123.25 7.25 7.25 7.25 7.25 7.25 7.25 7.25 7	11 66.77 7.63.52	111 2407 2402 2402	11 - 14 118.3 18.53	 	8.5 -12.8	0.03 4.05 7.1 7.1 7.1 7.1	11.1 10.6 - 1.3 -21.7 - 23.0	18.0	18.0
	Overrun run on n	: Scribner :	Per	13.6	1 1 400W4 400W4	1 1 1 www.0'4 wrivo.si o	1 1 1 1	0.5	1.1	11.9 24.0 15.8 15.1 15.8	1111 02005 02005 03005 0	7.7	61.55
	No. 1	S	Per	74 76.7 79.75.8 20.55.5	27.28.78 20.00.00 2.20.00.00	\$ 25.05. \$ 5.05.	2000 2000 2000 2000 2000 2000 2000 200	81.1	80.5 90.4	4.54.7 4.58.1.8 7.4.8 7.4.8	87278 8730 877.00	56.2	54.0 550.2 66.9
1 .ON	ades	:No.3 C	Per	110246	らいいろう	2 . v.o.o.	ww 14   ww 16	 t.	m1118 4.2 2.1	NO. 3 16.1 7.5 7.5	wwo+uw	5.6	6.6 0.0 2.2
GRADE N	nt gr Ition	No.2 G	Per	25.27.1 6.5.5.2.6 6.5.5.5.6	10.2550	120.6 11.0 11.0	23.0 122.1 11.6	14.9	rage by 15.3	GRADE 42.5 45.3 45.3	122.93 811 102.99 831	38.2	739.2 419.8 30.9
LOG	differen	:No.1 C	Per	12.0 13.9 13.5 13.7	12.20 13.20 13.86	000000 500000 500000	26.57	16.2	Ave 17.8 25.3	20.7 20.7 43.1 35.1	767775 76771005	9.	42.0 40.0 58.1
	aber in in gr	Selects	Per	17.0 8.1 7.7 10.9	ลองตุเกษ เก๋เก๋เก๋อ๋	878. 760.67	17.71 6.00 6.00	, w	8.1 6.8	9.11 7.66 7.66	00040 000000	π· π	10.55
	Lumb	দ ধ জ	Per	57.07.47 80.00.00	67.75 45.75 67.75 65.75 7.75 65.75	575.0 43.66.0 44.66.0	27 27 27 27 27 27 27 27 27 27 27 27 27 2	54.8:	54.6: 58.3:	11.0 66.0 1.9	on won o	7.2:	7.7
	No.	100f		ה ברט בט	100 100 100 100 100 100 100 100 100 100	→ W00H		95	91 4	amom		39	32
	Diameter	: ineide : bark :	Inches	111111	23.22 23.22	82782	32725	20.7	20.6 22.8	24222		17.2	17.0
		num- ber		A11 mills		*====	****	Aver- age of all mills	2	All mills		age of all mills	745



Volume	in each diameter lumber tally	Percent	100010 100011	10.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	するでする	0.004.u uvvuv	10111 18044	
	Defect	Per	00Hu3	ง พูพูตุลูเก นุกเกตต	ようられる。	00000 ++0000	% + 0 0 m	<b>#</b>
and under- net scale	Doyle	Per	3.2.2.5 2.2.3.5.5 2.2.1.6.5	26.7 27.5 13.9 0.51	11.3.1.3.6.5.0.6.6.6.6.6.6.6.6.6.6.6.6.6.6.6.6.6		- 26.8 21.0 10.0 17.9	16.5
Overrun a	Scribner	Per	10000 1000 1000 1000 1000 1000 1000 10	1111 1200 1000	1000ma	1 1 0.0.0.w 1.0.0.v	1 6 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<b>4.</b> 6
	and better	Percent	インで インシャン	11 577 11 577 10 500	24700 04700 06007	000000 000000 40000	4 60 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	45°.5
	Pecky: Timbers	Per	# 0.000 2000	44001	811.60	5.5	16.0	4.6
dition	Pecky	Per cent:	11000	14.8 2.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3	10000 100000 100000	12.9	11.00.	7.4
een cond	No.4 Common	Per	10101	00.10.w 00.10.t	oillut w ww	00000 momm	د. ا ا ر. د. تې	1.2
s in gre	No.3	Percent	20000 2000	40000 40000	107.00	4.0.18.00	24.01.02 C.0.02. C.	7.1
grade	No.2	Per	# 000 c + + + + + + + + + + + + + + + + +	27.27.2	22.22.6 23.23.6 29.63.4	28 112 14 14 18 18 18 18	4.0000 00000	33.4
in different	No.1 Shop and No.1 Common	Per cent	201.9 201.9 201.9 201.9 201.9	% % % 4 %	1200000 4 1 0 500 4 1 0 500	## 1230 # 730 # 73	7.0004 K 7.0000 K 4.004 A 5.000 K	26.6
Lumber	Selects:	Per	100114 0 WIVIV.20	0.0000 0.0000	10.01	40004 40004	0.000 000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.	13.1
	A. A.	Per	11011	トロックトゥ	トラ0.0 44700	20.1 19.2 11.8	25.62.7.6	η. 20
2	logs.		739112	00000 000000	10707	4万17万		412
4	inside bark	Inches	12271	20 11 10 10 10 10 10 10 10 10 10 10 10 10	2%2,4%	3198878	なるようは	18.3
rest	• •• •• ••		All :: # # # # # # # # # # # # # # # # #		****	EFEEE	Aver	age of all: mills:

## FOREST PRODUCTS LABORATORY MADISON, WISCONSIN MAY 1933

I = 37

